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TRAINING MODULE FOR NURSES



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National AIDS Control Organisation**

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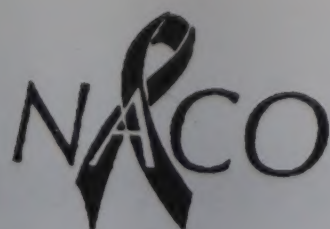
367, "Srinivasa Nilaya"

Jakkasandra 1st Main,

1st Block, Koramangala,

BANGALORE-560 034.

Phone : 5531518



TRAINING MODULE FOR NURSES



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NATIONAL AIDS CONTROL ORGANISATION

Ministry of Health & Family Welfare, Government of India
NEW DELHI

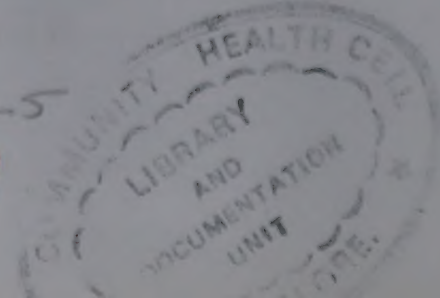
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Chapter 1

HIV/AIDS PANDEMIC: AN INTRODUCTION

OVERVIEW

On completion of this part of the module, the participant will have knowledge about the HIV/AIDS pandemic, epidemiology of HIV/AIDS, how HIV is transmitted, how it is not transmitted and the National AIDS Control Programme. The information is intended to sensitize the nurse about the problem at hand, remove their apprehensions and fears and prepare them to learn and understand various aspects of nursing care of people with HIV/AIDS.

OBJECTIVES

1. To learn about the genesis, growth and epidemiology of HIV/AIDS
2. To learn as to how HIV is transmitted and how it is not transmitted
3. To have a working understanding about the National AIDS Control Programme

INTRODUCTION

In 1981, individuals afflicted with a strange form of immunodeficiency started reporting to the physicians in California & New York in USA. They presented with Kaposi's sarcoma and Pneumocystis carinii pneumonia (PCP), both uncommon among the general and apparently healthy population. The only common link between them was that all were homosexual. It led to the belief that the immune-deficiency was peculiar and confined to homosexuals and named Gay Related Immune Deficiency (GRID). The belief was, however, short lived, for similar cases occurred among blood transfusion recipients. A little later similar cases were reported from amongst women and children in Africa as well. It became apparent that the disease was caused by a microorganism transmissible through blood and sex. The disease was named Acquired Immuno-Deficiency Syndrome (AIDS). In 1983 a virus was isolated from a patient with AIDS and identified as a retrovirus. Later World Health Organization (WHO) named it Human Immunodeficiency Virus (HIV). HIV infection has since assumed pandemic proportions and cases are now being reported from all over the Globe. WHO estimates that at the end of 1998, there already were 33.1 million, including 1.4 million children, infected with HIV world wide. WHO further estimates that the HIV has infected 8 million people in South & South-east Asia with India and Thailand among the worst affected countries. It fears that if the current trend continues India would have as many as 5 million HIV infections by the turn of the Century.

HIV entered India in 1980s. First HIV infection was reported from Chennai in May 1986. First case of AIDS was also reported in 1986 from Mumbai. Ever since HIV/AIDS epidemic is growing

steadily. By the end of October, 1998, there were 82,000 HIV infections and 6600 AIDS cases reported to the National AIDS Control Organization (NACO) from different parts of the country.

CONTENTS

1. What is HIV/AIDS
2. How HIV is transmitted
3. How HIV is not transmitted
4. The National AIDS Control Programme (NACP)

1. WHAT IS HIV/AIDS

HIV 1 and HIV 2 are two viruses that belong to the same family of retroviruses, but vary in their genetic make up. HIV 1 was first discovered in 1983 in France and seems to be more prevalent in Europe and the America. HIV 2 was first discovered in 1986 and is more prevalent in Africa. Both HIV 1 and HIV 2 have been detected in India and both lead to AIDS.

AIDS is an acronym for acquired immunodeficiency syndrome, a disease in which the body's immune system breaks down. Normally, the immune system fights off infections and certain other diseases. When the system fails, a person with AIDS can develop a variety of life-threatening illnesses.

2. HOW HIV IS TRANSMITTED?

If one has unprotected sex (sexual intercourse without consistent and correct condom use) or share needles or syringes with an infected person, one may become infected with HIV. Specific blood tests can show evidence of HIV infection. One can be infected with HIV and have no symptoms at all. One may feel perfectly healthy, but if one is infected, one can pass the virus to anyone with whom he/she has unprotected sex or share needles or syringes.

2.1 One can become infected with HIV in two main ways

- Having unprotected sexual intercourse – anal, vaginal, or oral – with an infected person.
- Sharing drug needles or syringes with an infected person or by blood transfusion.
- Also, women infected with HIV can pass the virus to their babies during pregnancy or during birth. They can also pass it on when breast-feeding.

i) One Can Get HIV From Sexual Intercourse

HIV can be spread through sexual intercourse, from male to male, male to female, female to male, and, in theory, from female to female.

HIV is sexually transmitted, and HIV is not the only infection that is passed through intimate sexual contact. Other sexually transmitted diseases (STDs), such as gonorrhea, syphilis, chancroid, candidiasis, trichomoniasis, herpes, and chlamydia, can also be contracted through anal, vaginal, and oral intercourse. If one already has one or more of these infections and engage in sexual behaviors that can transmit HIV he/she is at greater risk of acquiring HIV infection.

HIV may be in an infected person's blood, semen, or vaginal secretions

HIV can enter the body through cuts or sores in the skin. HIV can also enter the body through the moist lining of the vagina, penis, rectum, or even the mouth. Some of these cuts or sores are so small one does not even know they're there. Anal intercourse with an infected person is one of the ways HIV has been most frequently transmitted. Other forms of sexual intercourse, including oral sex, can spread it as well.

The only sure way to avoid infection through sex is to abstain from sexual intercourse or engage in sexual intercourse only with someone who is not infected. Latex condoms have been shown to help prevent HIV infection and other sexually transmitted diseases. But condoms should be used correctly every time one has sex.

ii) One Can Get HIV From Sharing Needles

Sharing needles or syringes, even once, is very risky. Many people have become infected with HIV and other germs this way. HIV from an infected person can remain in a needle or syringe and then be injected directly into the bloodstream of the next person who uses it. Sharing needles to inject IV drugs is the most dangerous form of needle sharing.

Sharing needles for other purposes may also transmit HIV and other germs. These types of needles include those used to inject steroids and those used for tattooing or ear-piercing.

If one plans to have his/her ears pierced or get a tattoo, he/she should make sure to go to a qualified person who uses brand-new or sterile equipment. One should not feel shy about asking questions.

iii) HIV And Babies

A woman infected with HIV can pass the virus on to her baby during pregnancy, while giving birth, or when breast-feeding.

Any woman who is considering having a baby or to continue her pregnancy and who thinks she might have done something that could have caused her to become infected with HIV - even if this occurred years ago - should seek counseling and testing for HIV infection to help her make an informed choice about becoming pregnant or continuing the pregnancy.

iv) Blood Transfusions And HIV

In the past some people became infected with HIV from receiving blood transfusions. With the introduction of mandatory screening of all blood/blood products for HIV, this risk has been reduced but can not be completely eliminated.

One cannot get HIV from giving blood at a blood bank or other blood collection center. The needles used for blood donations are sterile. They are used once, then destroyed.

2.2 Will One Get AIDS if he/she is infected With HIV?

About half of the people with HIV develop AIDS within 10 years, but the time between infection with HIV and the onset of AIDS can vary greatly. The severity of the HIV related illnesses will differ from person to person, according to many factors, including the overall health of the individual.

Today there are promising new medical treatments that can postpone many of the illnesses associated with AIDS. The scientists are optimistic that HIV infection will someday be controllable. In the meantime, people who get medical care to monitor and treat their HIV infection can carry on with their lives, including their jobs, for longer than ever before.

2.3 One Does Not Get HIV Through:

HIV infection doesn't "just happen." One can't "catch" it like a cold or flu. Unlike cold or flu viruses, HIV is not spread by coughs or sneezes.

- One won't get HIV through everyday contact with infected people at school, work, home, or anywhere else.
- One won't get HIV from clothes, phones, or toilet seats. It can't be passed on by things like forks, cups, or other objects that someone who is infected with the virus has used.
- One won't get HIV from eating food prepared by an infected person.
- One won't get HIV from a mosquito bite. HIV does not live in a mosquito, and it is not transmitted through a mosquito's bite like other germs, such as the ones that cause malaria. You won't get it from bedbugs, lice, flies, or other insects, either.
- One won't get HIV from sweat or tears.
- One won't get HIV from a simple kiss. Most scientists agree that transmission of HIV through deep or prolonged kissing is possible because of potential blood contact, albeit chances are very meagre.

3. NATIONAL AIDS CONTROL PROGRAMME

The National AIDS Control Program (NACP) was launched in 1987 which implemented its Strategic

Plan for Prevention and Control in 1992. The aim of the plan was to establish a comprehensive, multisectoral program for the prevention and control of AIDS in India. Seven strategies were identified to achieve the objectives of the plan, which conform to those of Global AIDS Strategy. These are:

- i) Program management;
- ii) Surveillance and Research;
- iii) Information, Education and Communication (IEC) and Social mobilization;
- iv) Sexually transmitted Disease (STD) control;
- v) Condom Programming;
- vi) Blood Safety; and
- vii) Reduction of Impact.

Biomedical research in the modern medicine as well as in the Indian systems of medicine is being encouraged by NACO. Social and psychological research is an important input for the implementers towards selection of the most effective approach and adaptation of the strategy to suit the current needs of the time. Prevention Indicators Survey, Behavior Sentinel surveillance survey and High Risk Behavior Survey have proven to be of great importance for the policy makers.

i) Programme Management

For effective implementation of the NACP, ensuring efficient management of the program is important. The National AIDS Control Organisation (NACO), established in the Department of Health, Ministry of Health & Family Welfare, is a comprehensive structure at the national level which forges alliance with various ministries and non-governmental organizations, coordinates and monitors the program activities in various states, strengthens the technical and research capabilities and has a system of monitoring and evaluation.

ii) Intersectoral Collaboration

To use the already established extensive network of the government and to seek both greater involvement and commitment of various sectors, links have been established with various ministries, as well as corporate sector. It also increases the reach of NACO to various segments of the society, viz the youth, school going adolescents, women, industrial workforce etc.. NACO also collaborates with various sponsoring and donor agencies, both multilateral and bilateral, as also with NGOs which provides NACO with an established community-based bases of operation.

iii) HIV/AIDS Surveillance

A regular assessment of the magnitude and dynamics of the HIV/AIDS prevalence is vital for

the planning. Currently the objective of surveillance is to monitor trends in specific high risk groups and the low risk groups through its 62 sero-surveillance centers functioning with 55 sentinel sites. Efforts are on to determine the trends more accurately by improving reporting, diagnosis of AIDS cases and better case management. Personnel have been trained, sentinel surveillance protocols have been approved and sentinel surveillance sites selected. Fourth round of sentinel surveillance has been completed at 18 sites in 7 states.

iv) Sexually Transmitted Diseases

Since HIV is largely transmitted through sexual route and is related to the same risk behavior the prevention of STDs remains an effective strategy in controlling the HIV transmission. Also, the presence of an ulcerative STD greatly enhances the transmission of HIV. Various intervention projects in India and other African countries have observed stabilization of HIV incidence in the targeted groups where STD treatment services have been provided. STD services in a non-stigmatizing set up, particularly keeping in view the needs of female patients has been priority. 504 STD clinics have been upgraded and strengthened to provide medical services at the primary health care level. Training of the medical officers and laboratory technicians for better diagnosis and treatment have also been high on agenda.

v) Condom Programming

Since sexual contact accounts for nearly 75% infections in India, promotion of condom use is the most effective way of preventing transmission. A program was initiated by NACO to make inexpensive, good quality condoms available to the more vulnerable groups through intervention projects and STD clinics. Condoms conforming to WHO specifications only are procured by the government. Social marketing of condoms at a subsidized price has been the policy of the government. All the need of STD/HIV clinics are met with by the Ministry of Health & Family Welfare.

vi) Blood Safety

There is an overall shortage of blood mainly because of insufficient voluntary donations. However, efficient management of blood and its components through adequate measures for collection, storage and issue, and more importantly, rational use of it could help the situation to some extent. There is a comprehensive programme to modernize blood banks, to establish zonal blood testing facilities for HIV screening and to recruit and train staff to an adequate level. A major thrust to the program came with the Supreme Court Judgement asking the Union of India and States to revamp the blood banking system and to form national/state blood transfusion councils (NBTCs).

vii) IEC

A major component of the prevention and control strategy is to create an informed environment

for people to scrutinize their behavior and adopt safer practices by raising the awareness and knowledge about HIV transmission and prevention, thus affecting their attitudes and behaviour patterns. NACO is using various channels to reach every vulnerable segment of society, viz., women, youth, adolescents, industrial workforce as well as high risk groups. Specialized packages have been developed so as to influence the target audience and bring about maximum positive impact. Psycho-social research is an important input to the development and implementation of the policies.

viii) Targeted Interventions

Since the major pool of HIV is still the high risk groups such as, commercial sex workers and their clients as also injecting drug users, it is important that concerted interventions be aimed at such groups to prevent further transmission from these groups as also providing adequate health services and counseling to them. Targeted interventions focus on particular groups and offer an integrated set of interventions specific to the needs of that group. Some of the more successful projects are the ones running in Calcutta and Raxaul.

ix) Reduction of Impact

While preventing people from getting infected a support system has been developed by NACP to help the individuals, families and communities absorb the impact of HIV/AIDS. The strategy includes training of counselors, medical and paramedical staff in AIDS case management and developing a community base care system.

x) Programme Finance

A remarkable improvement in utilization of funds by states such as Andhra Pradesh, Assam, Himachal Pradesh, Haryana, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Meghalaya, Nagaland, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, Delhi and some Union Territories, leading to utilization of 121.31% of the projected utilization for the year 1996-97 has become apparent. However, for want of proper implementation by some states, delay in submission of reimbursement claims, fluctuation in exchange rate of US Dollar vis-à-vis the Indian Rupee, and procedural delays in procurement of equipment for blood banks, blood component separation facilities, and STD clinics, disbursements have been on the slower side.

Chapter 2

NURSING CARE OF THE ADULT WITH HIV DISEASE

OVERVIEW

The participant needs to learn the following:

- Basic nursing skills
- An understanding of the principles of community-based (home-based) care

On completion of this part of the module, the participant will be able to identify nursing interventions designed to meet the physical, and psychosocial needs of the adult with symptomatic human immunodeficiency virus (HIV) disease.

OBJECTIVES

1. to identify acute and chronic physical problems associated with HIV infection and plan meaningful nursing interventions,
2. to describe the nursing implication of the available medical treatment for the range of common opportunistic diseases associated with HIV infection seen in their own community,
3. to discuss the concept of case management and the role of the nurse in enabling the patient to be cared for at home, and
4. to develop a nursing care plan based on local facilities and resources available to meet the physical, emotional, financial and social needs of person with HIV/AIDS.

INTRODUCTION

Nursing care of people infected with HIV presents multidimensional challenges to nursing personnel at all stages of the disease. Sensible and compassionate care is of paramount importance and plays a very important role in the clinical management of person with HIV/AIDS. While providing care, the nurse promotes an environment in which values, customs and spiritual beliefs of the person are respected and his/her dignity is maintained. The nurse, while caring for her patient, sets an example of appropriate non-judgmental attitude to other fellow workers and people in the community. Owing to the wide range of opportunistic diseases and psychosocial impacts they cause, the nurse requires to master a variety of professional nursing skills to provide safe and optimal nursing care at all levels of health. Nursing care of a person with HIV disease is the same as for any person with any other disease.

CONTENTS

1. Nursing Intervention in Symptomatic HIV Infection.
2. Medical Treatment of Opportunistic Diseases and Nursing Issue in HIV Disease.
3. Community Case Management.
4. Case presentation of Symptomatic HIV Disease.

1. NURSING INTERVENTION IN SYMPTOMATIC HIV INFECTION

- The development of symptoms after infection with HIV may take as long as several months or years. Since the incubation period is so long, it is not certain if all infected people will necessarily become ill.
- The severity of clinical manifestations, depending upon the degree to which HIV disease has progressed, vary from person to person. Whereas some may need intensive nursing care support in hospital, others may be able to either care for themselves or be cared for by family members at home.
- Of all health care workers, nurses spend the greatest amount of time with patients and their families. Therefore, they are in a key position to observe clinical signs and assess the patient's needs. They are required to be sensitive in identifying these needs.
- In the process of care, nurses themselves will be required to review their own views/feelings about sexuality, homosexuality, disability and death of predominantly young people.
- Most individuals infected with the virus feel well and remain asymptomatic. Some may develop symptoms resembling those of other common diseases, nurses are familiar with. Nursing interventions for patients with HIV will be similar to nursing care given to persons with similar signs and symptoms. The following are the signs and symptoms commonly seen in persons with symptomatic HIV disease.

1.1 What is HIV AIDS

It is important to distinguish between being infected with HIV and having AIDS. People infected with HIV may take 5-10 years to develop AIDS. AIDS is diagnosed by demonstrating a positive HIV test and presence of one or more of opportunistic infections or malignancies or CD4 count of less than 200. Since sophisticated tests for CD4 count and other blood test may not be available in all the places, WHO has listed a few signs that help in provisional diagnosis of AIDS. The presence of atleast two major signs associated with atleast one minor sign can be an indication of AIDS provided that other causes of depleted immunity, like malnutrition have been ruled out.

The major and minor signs are listed below:

Major Signs

- Weight loss greater than 10% of body weight
- Fever for longer than one month, intermittent or continuous
- Chronic diarrhoea for more than one month, intermittent or continuous.

Minor Signs

- Persistent cough for longer than one month
- General itchy dermatitis
- Recurrent Herpes Zoster
- Oropharyngeal candidiasis
- Chronic progressive and disseminated Herpes simplex
- Generalised lymphadenopathy

1.2 What is Window Period?

After one acquires HIV the anti bodies against HIV start appearing in blood in significant amount only after 6-12 weeks. If blood is tested in the period immediately after infection, known as the window period, the ELISA test will fail to indicate positivity even though the virus inside the blood.

1.3 What are symptoms of acute HIV infection?

After an incubation period of 2-6 weeks, there is a phase of viraemia and upto 50% of individuals experience an acute flu like phase having high fever, pharyngitis, arthralgia, myalgia, rash and lymphadenopathy. The illness may last upto 2 weeks or less and may go even unnoticed as possibility of HIV infection is frequently not explored at this stage.

1.4 What are common health problems in symptomatic HIV disease?

The broad range of potential health problems which are commonly seen in symptomatic HIV disease, their possible causes and effects on health are presented in **Table 2.1**. This is intended to help in identifying alternative intervention and planning individualized nursing care.

Table 2.1: Common Health Care Problems in Symptomatic HIV Disease

Problems and Possible Causes	Effects on Health
Diarrhoea <i>Infections</i> <ul style="list-style-type: none"> ◊ Cryptosporidium ◊ Isospora ◊ Giardia lamblia ◊ Salmonella spp. ◊ Shigella flexneri ◊ Campylobacter spp. ◊ Entamoeba histolytica ◊ Cytomegalovirus ◊ Strongyloides stercoralis ◊ Mycobacterium avium complex 	<ul style="list-style-type: none"> * Chronic and severe problems confining the person to bed
◊ Malignancies	<ul style="list-style-type: none"> * Significant weight loss
◊ Kaposi's sarcoma; lymphoma	<ul style="list-style-type: none"> * Life threatening due to dehydration and electrolyte imbalance
Pyrexia <ul style="list-style-type: none"> ◊ Infection ◊ Drug reaction 	<ul style="list-style-type: none"> * Continuous or intermittent, often low grade * Rising during periods of acute infection * Sometimes associated with sweat
Pain <ul style="list-style-type: none"> ◊ Oedema ◊ Candidiasis <i>Peripheral Oedema</i> <ul style="list-style-type: none"> ◊ Lymph node enlargement ◊ Kaposi's sarcoma 	<ul style="list-style-type: none"> * Immobility of the part discomfort * Inability to swallow (dysphasia) * Nodal asymmetry * Fever
Dyspnoea <ul style="list-style-type: none"> ◊ Chest infections ◊ Anaemia 	<ul style="list-style-type: none"> * Shortness of breath on slight exertion or otherwise * Fatigue
Anorexia <ul style="list-style-type: none"> ◊ HIV disease last stage ◊ Side effect of medical therapy 	<ul style="list-style-type: none"> * Refuses food * Thin and emaciated

Problems and Possible Causes	Effects on Health
Malnutrition ◇ Dysphasia ◇ Anorexia ◇ Inadequate nutrient intake e.g. protein ◇ Malabsorption	* Severe weight loss * Wasting syndrome or slim disease seen in the end stage of the disease
Skin and Mucous Membrane lesions <i>Variety of lesions</i> - Candidiasis - Kaposi's sarcoma - Herpes simplex/zoster	* skin lesions involve mucous membrane and develop ulceration, sore on the affected part
Visual Problems ◇ Retinitis due to cytomegalovirus ◇ Neurological in origin	* Diminished vision or blindness will cause difficulty to a person to perform daily living activities
Neurological Impairment ◇ HIV Infection Neuropathy	* These may have physical and cognitive aspects like peripheral neuropathy, ataxia, dysphasia, blindness, deafness, paralysis Memory loss, slow thinking, confusion
Dependence ◇ Chronic diseases ◇ Neurological Impairment ◇ Cough ◇ Chest Infections	* Progressive weakness, immobility * Throat irritation, discomfort due to persistent coughing
Ignorance ◇ Non-accessibility to proper information on HIV infection/disease	* Misconception * Unable to accept the sickness
Apprehension/Fear ◇ Social and emotional issues involved	* Isolated * Being rejected by family and friends * Losing job * Incurable disease, death etc.

Some of these problems are described in detail below:

(i) Chronic Diarrhoea

Diarrhoea occurs at some point of the clinical course of HIV infection. Clinical features of mild and severe diarrhoea are discussed in **Table 2.2**.

Table 2.2: Clinical Features of Diarrhoea

Clinical Features	Severity of Diarrhoea	
	<i>With Mild Dehydration</i>	<i>With Severe Dehydration</i>
General appearance/condition	Restless, irritable	Usually conscious; apprehensive; cold, sweaty, cyanotic extremities
Pulse	Rapid	Rapid, feeble, sometimes impalpable
Respiration	Deep, may be rapid	Deep and Rapid
Skin elasticity	Pinch retracts slowly	Pinch retracts very slowly (>2 seconds)
Eyes	Sunken	Deeply sunken
Mucous membranes	Dry	Very dry
Urine flow	Scanty and dark	None passed for 6 or > hours; empty bladder

(ii) Pyrexia

Fever of a duration of more than two weeks in a person with a prior history of symptomatic HIV infection or in a known HIV positive asymptomatic person. Body temperature rises above 38°C continuously for > 24 hours or intermittently for > 24 hours in any 72 hour period. There may be chills and/or drenching night sweat lasting for several weeks.

(iii) Oral Thrush (Candidiasis)

Oral thrush (candidiasis) is characterized by whitish plaques on the oral mucosa, located usually on the palatal or buccal mucosa. When removed, these reveal a bleeding surface underneath. Candidiasis often extend to oesophagus in an HIV infected person with oral thrush and may cause dysphasia, pain on swallowing (odynophagia) and poor nutrition.

(iv) Respiratory Symptoms

HIV infected person becomes susceptible to a number of respiratory infections viz. Mycobacterium tuberculosis (TB), pneumocystis carinii pneumonia (PCP) etc. Common signs and symptoms of

these conditions are cough, chest pain, dyspnoea, cyanosis, hypoxaemia, etc. Certain malignancies (i.e. Kaposi's sarcoma); and other associated conditions (pleural effusion, empyema, pneumothorax, pericardial effusion) are also commonly seen in people with HIV.

(v) Lymphadenopathy

Enlargement of lymph nodes in persons with symptomatic HIV disease is generalized and persistent. Usually more than three separate lymph node groups are affected with at least two nodes at each site are >1.5 cm in diameter for more than a month. Apparently no other cause, local or contagious, suggestive of lymphadenopathy is present.

(vi) Neurological Impairment

- a) **Headache:** Person with symptomatic HIV infection often complains of persistent or severe and rapidly increasing headache not responding to common analgesics. There may or may not be fever. Other causes of headache viz. migraine, tension, sinusitis, refractive disorders, dental disease, anaemia, hypertension, if present, should be identified and treated.
- b) **Changes in Mental State** (may be subtle): These include loss of concentration, personality change (mild to psychotic), confusion, cognitive impairment and dementia,
- c) **Others:** Include paresis, cranial nerve palsies, movement disorders, ataxia, aphasia, and seizures

(vii) HIV Associated Skin Diseases

The presence of dermatosis in a person with symptomatic HIV disease may be due to viral or bacterial or fungal infection, malignancy, drug reaction or some other condition viz. scabies, psoriasis etc.,

1.5 Nursing Care of Patients with Symptomatic HIV Disease

i) Goals and Objectives of Nursing Care

- a. **Goal of Patient Care:** The overall goal of patient care is to relieve physical symptoms and maximize the level of functioning and quality of life. Meeting these goals is crucial to the patient's physical and psychological comfort and well being.
- b. **Objective of Nursing Care – The objectives are:-**
 - To relieve physical discomfort and provide emotional support to the patient and the family.
 - Assist in making patient and family to be independent in meeting their health needs by encouraging their active participation in the care-plan.

- Help them to accept the sickness like any other terminal illness and adjust to its consequences.
- Counselling to change his/her behaviour

Disclose the status to one close family member whom patient prefers to tell.

Therefore, nursing interventions are developed on the basis of these goals and objectives. Knowledge of the available community and medical resources for referrals of HIV infected/AIDS cases is essential for optimal care. Refer Exhibit No. 2.1.

ii) Utilization of Nursing Process in Symptomatic HIV Infection:

The nursing process is a systematic way of providing effective nursing care. An interview with the patient, general observation and examination provide assessment data, which helps in determining whether the nursing interventions need to include education, counseling and/or physical assessment.

iii) Nursing Care Interventions

Nursing actions are not one time act but continuous evaluation of the effect(s) of actions taken and any warranted modification depending on the situation and the need of the patient.

Nurses are familiar with most of the clinical problems encountered in symptomatic HIV disease, even though the underlying causes may be different (**Table 2.1**). The following **Table 2.3** on nursing care contain a list of such problems and appropriate nursing interventions.

Table 2.3: Nursing Care Plan

Problem and Nursing Diagnosis	Nursing Interventions
Diarrhoea ♦ Alteration in elimination ♦ Diarrhoea related to opportunistic infection	<ul style="list-style-type: none"> * Perianal skin care – after each bowel movement, clean area with warm soapy water. Gently pat dry the area with soft cloth to prevent weakened skin from tearing. Apply petroleum jelly/vaseline to protect the skin. * Assess for complaints of discomfort and areas of excoriation or inflammation. * Encourage fluids such as broths' and juices' intake to replace lost fluid and electrolytes (potassium, sodium). * Offer small amounts of low fibre food every two hours. * Administer antidiarrhoeals as prescribed. * Assess for fecal impaction where overflow of stool may be occurring (digital exam).

Problem and Nursing Diagnosis	Nursing Interventions
Nausea and Vomiting <ul style="list-style-type: none"> ◊ Alteration in nutrition. ◊ Less than body requirements related to nausea and vomiting, difficulty in swallowing. 	<ul style="list-style-type: none"> * If vomiting, do not give anything by mouth for two hours, then offer ice chips, clear liquids, progress to soft diet as tolerated. * Provide meticulous oral hygiene since it prevents painful infection and appetite loss. Prevent mouth from drying by keeping water at bedside. * Administer anti-emetics as prescribed, give 30 minutes before meals.
Fever <ul style="list-style-type: none"> ◊ Alteration in body temperature ◊ Hyperthermia related to HIV or opportunistic infection 	<ul style="list-style-type: none"> * Monitor temperature every four hours. * Administer antipyretics as ordered. * Encourage fluids' intake, as tolerated. * Give a tepid bath, ice or cold pack.
Dyspnoea <ul style="list-style-type: none"> ◊ Alteration in oxygenation ◊ Impaired gas exchange related to hypoxaemia 	<ul style="list-style-type: none"> * Assess respiratory status every two hours note respiratory rate and quality, presence of cough, skin related to hypoxaemia colour. * Teach the patient how to make the breathing easier by following:- <ol style="list-style-type: none"> 1. Relaxation techniques to decrease anxiety and conserve oxygen when breathing is difficult. 2. Pursed lip breathing to decrease respiratory rate. Teach the patient to whistle to breath out slowly, making a slow whooshing sound, not to puff cheeks and feel abdomen fall. 3. Teach the patient about the signs and symptoms of infection, and use of oxyger and other medications as necessary. 4. Determine if the patient/family understands the plan of action if symptoms worsen, e.g. referral to hospital or palliative care in the home.
Pain <ul style="list-style-type: none"> ◊ Alteration in comfort ◊ related to muscle aches from immobility 	<ul style="list-style-type: none"> * Assess location, type and intensity of pain * Evaluate the patient's perception of pain * Administer analgesics as ordered round the clock

Problem and Nursing Diagnosis	Nursing Interventions
	<ul style="list-style-type: none"> • Reposition the patient to alleviate pressure points • Light massage
Cognitive Impairment <ul style="list-style-type: none"> ◊ Alteration in thought process ◊ Confusion related to neurological changes or stress 	<ul style="list-style-type: none"> • Assess baseline mental status • If confused, speak in a calm manner, give one instruction at a time and repeat information, if necessary. • Avoid disagreements with the patient as this may cause anxiety • Prevent injury by keeping environment clear of unnecessary hazards • Use memory cues e.g. family objects, calendar. • Provide family support and instruct care giver family about the above interventions.
Fatigue and Weakness <ul style="list-style-type: none"> ◊ Alteration in self-care ability related to fatigue and weakness 	<ul style="list-style-type: none"> • Involve the patient in planning for needs • Encourage frequent rest periods and intermittent activity • Identify supportive devices, means to conserve energy e.g. commode walker, cane • Instruct and supervise family/care giver in assisting with hygiene, mobility, feeding and psychological support. • Refer to occupational or physical therapy as available for assistance in daily living and with mobility.
Skin Breakdown <ul style="list-style-type: none"> ◊ Alteration in skin and mucous membrane integrity related to immobility and disease condition 	<ul style="list-style-type: none"> • Reposition the patient every two hours. • Keep skin clean and dry. • Expose lesions to open air. • Moisturize skin with emollients or coconut oil to prevent drying specially after bath or sponging. • Massage to improve circulation to area of the skin over bony prominences. • Assess skin for reddened pressure areas, which are forewarning of a skin breakdown.

Problem and Nursing Diagnosis	Nursing Interventions
	<ul style="list-style-type: none"> * Mouth care using potash, condys solution or hydrogen peroxide should be done three times daily and before the administration of topical antifungal medication. * Teach care givers with draining wounds or lesions on their hands, to wear gloves.
Depression ◇ Alterations in meaningfulness relating to feeling of haplessness	<ul style="list-style-type: none"> * Set time aside to talk to the patient and allow him/her to express his/her fears and concerns. Give information about those areas that the patient has expressed concern about * Involve the patient in planning and providing own care as much as he/she is able to provide. * Identify the patient's interest and explore involvement. * Identify ways in which the patient has coped with problems in the past to identify (learn about) strengths and weaknesses.
Knowledge Deficit ◇ Knowledge deficit related to disease process	<ul style="list-style-type: none"> * Assess caregiver environment and baseline understanding of HIV and its transmission. Instruct the patient on HIV transmission and safer sex practices. * Instruct care-givers in utilizing universal precautions. * Both the patient and the environment should be kept as clean as possible to prevent the patient from becoming ill or injured.

iv) Psychological Issues/Counseling Needs

A person with symptomatic HIV disease may become overwhelmed by intense, painful feeling. Uncertainties exist for such individuals as to whether or not they will remain healthy.

1.6 Check Your Progress

- i) Read the following statements carefully and tick T when it is 'True' and 'F' in case it is False.
 - a. Adherence to the universal HIV control measure is one of the principles of nursing care management. T/F

- b. The goal of nursing intervention is that the patient is to be dependent on nurses for all his health care needs. T/F

2. MEDICAL TREATMENT OF OPPORTUNISTIC DISEASES AND NURSING CARE ISSUES IN HIV-RELATED ILLNESS

No treatment so far has resulted in restoring the immune function of a person with HIV infection. An HIV infected person becomes susceptible to a wide range of opportunistic infections. Therefore, if HIV disease is suspected in a sick person, immediate referral to hospital is required for appropriate treatment. Timely treatment of infection is often successful. This section will focus on the common opportunistic condition/diseases, medical treatment and nursing care issues as follows:-

2.1 System-wise opportunistic Conditions associated with HIV Infection

(A) Lungs

i) Pulmonary Tuberculosis

This is the commonest opportunistic infection seen in patients of HIV/AIDS and at present we are faced with dual epidemic of TB and AIDS. The diagnostic and treatment of tuberculosis in a HIV positive person remains same as advocated by WHO for HIV negative persons except that duration of treatment may be prolonged.

ii) Pneumocystis Carinii Pneumonia (PCP)

PCP is a parasitic (currently termed a fungus) infection of the lungs. *Pneumocystis carinii* is a normal flora, found in the respiratory tract. It does not cause any problem in persons with competent immune system. However, in a person with immune suppression, it causes clinically active disease. PCP is strongly indicative of HIV disease and often lead to the confirmation of diagnosis. A person with PCP present with a persistent non productive cough, shortness of breath on exertion and protracted fever of many weeks' duration. Tachypnoea at rest is often present. On presentation a chest X-ray may show interstitial lung shadows or it may be clear. Blood gas analysis and other lung function tests. There is usually a marked hypoxia even if the chest X-ray is clear. In such a case if the person is in a risk group the diagnosis of PCP should be considered. PCP can be treated successfully at home with oral medication. In untreated cases deterioration occurs rapidly necessitating hospitalization.

Bronchoscopy and sputum examination are the diagnostic procedures carried out to establish early diagnosis. Nurse has an important role in inducing sputum production. She/He should instruct the patient not to take anything by mouth, maintains good oral hygiene, gives hypertonic saline inhalation via ultrasonic nebuliser to release the sputum. This procedure is continued till two samples (atleast 5 ml each, second sample is more reliable for testing) are obtained. Bronchoscopy is carried out for unsuccessful sputum induction for broncho alveolar lavage (BAL)

and trans bronchial biopsy (TBB). Although PCP is the most likely diagnosis, other infections such as CMV, mycobacteria and cryptococci, may produce such a presentation alone or in concert with pneumocystis carinii. The diagnosis is, therefore, important for deciding about the treatment.

(B) Central Nervous System

Central nervous system involvement is common in HIV disease. Presenting symptoms include lethargy, depression, personality change, impairment of intellectual functions such as short term memory, confusion, fits, headaches, and/or ataxia. Hemiplegia or dysphasia may also occur. Toxoplasma, or less often fungal infection, cerebral abscesses, herpes simplex encephalitis and cerebral lymphoma best shown initially in CT scanning, are important but treatable causes of space occupying lesions. Infection with papovavirus may occur and lead to progressive multifocal leucoencephalopathy, that has characteristic CT scan appearances. Cryptococcal or tuberculosis infection may present as sub-acute meningitis with minimal signs and symptoms. A diffused cerebral atrophy has also been reported. This rogressive disorder may be due to an opportunist infection such as cytomegalovirus, but recent evidence points to direct infection of brain cells with HTLV III as the major cause.

(C) The Eye

Retinal lesions are common and include non specific cotton wool spot or larger exudates associated with pneumocystic or toxoplasma infection. Haemorrhagic choroidoretinitis and vascular occlusions may be part of an aggressive cytomegalovirus retinitis which may rapidly lead to blindness. Examination of fundi provides valuable assistance in the diagnosis.

(D) The Alimentary Tract

HIV disease often present with oral (usually first sign of HIV induced immune deficiency) and oesophageal candidiasis. Intractable diarrhoea may also occur. Investigation of the diarrhoea does not always reveal a cause but involvement of cytomegalovirus or Kaposi's sarcoma, cryptosporidiosis or mycobacteria need to be considered and investigated.

Although in healthy individuals, cryptosporidiosis is normally a self-limiting condition, it poses particular problems in the presence of immuno-suppression. Cryptosporidium is demonstrable on an acid-fast stained stool specimen. Concentration of the stool specimen is critical for the identification of pathogen.

(E) Pyrexia of Unknown origin (PUO)

HIV disease often present pyrexia as a major sign. Cytomegalovirus, mycobacterium tuberculosis or atypical mycobacteria are commonly responsible. However, in immunocompromised patients, the mycobacterium does not usually excite a granulomatous reaction, so diagnosis often prove difficult. Tuberculosis may be miliary and it may be necessary to examine stain tissue biopsies,

marrow, for acid-fast bacilli. Pyrexia is also present in initial stage of PCP in majority of the cases.

(F) Lymphomas and Other Tumours

B-cell lymphomas, often with extensive extranodal disease, are part of the spectrum of complications of HIV infection. This need also be considered when persons present with progressive generalised lymphadenopathy. Some patients with HIV disease also develop Hodgkin's disease in. Other tumours, such as squamous carcinoma of the anus and cloacogenic carcinoma of the anorectum, have also been described in homosexual men with HIV disease. Their relationship to HIV infection is, however, uncertain.

(G) Lymphadenopathy and Minor Illnesses Associated with HIV Infection

Lymphadenopathy is already widespread in certain groups at risk (e.g. homosexuals with multiple sexual partners and in haemophiliacs). Estimates vary as to what percentage of individuals will ultimately develop HIV disease, but available information suggests it to be around 10%. The common signs are bilateral lymphadenopathy at three or more sites which may fluctuate and persist for months, and hepato-splenomegaly.

Rashes (dermatitis, folliculitis, tinea, shingles and impetigo) and oral candidiasis (thrush) are common in patients with HIV related lymphadenopathy. The majority of persons with lymphadenopathy alone seem to have good prognosis and have rarely progressed to AIDS in succeeding 3 or 4 years. Persons with lymphadenopathy with major weight loss, unexplained diarrhoea, fever, oral candidiasis and lymphopenia need to be followed more closely as they are more likely to progress to AIDS. Other sick people may have these symptoms without lymphadenopathy as part of the predromal disorder. Unexplained thrombocytopenic purpura is also reported to be associated with HIV infection.

Some patients with predromal disorders may show raised ESR, anaemia, lymphopenia, or thrombocytopenia but other patients with lymphadenopathy may have a normal haematological picture. A polyclonal rise in immunoglobulin is commonly associated with these minor variants. Blood tests are not necessary prior to referral.

2.2 Diagnosis of Common Opportunistic Conditions in HIV Infection

The various laboratory investigations required for their diagnosis are discussed in **Table 2.4**.

Table 2.4: Opportunistic Conditions and Laboratory Investigations

Opportunistic Infection	Laboratory Investigation
i) Respiratory System <ul style="list-style-type: none"> • Tuberculosis ◇ Pneumocystis carinii pneumonia <ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> * Sputum for acid alcohol fast bacilli (AFB) on 3 consecutive days * Chest X-ray * Pleural aspirate for microscopy for cell, biochemistry for protein and sugar * Full blood count, Blood culture * Biochemistry * We don't advice TB Serology * Analysis of blood gases, X-ray chest, blood count, biochemistry, serology, Bronchoscopy, body weight exercise oximetry
ii) Gastrointestinal System ◇ Isospora belli infections, if recognized, can be well controlled.	<ul style="list-style-type: none"> * Stool for microscopic examination
iii) Central Nervous System	<ul style="list-style-type: none"> * Lumber puncture if clinically indicated, C.S.F. for microscopy culture/sensitivity, cells, sugar.
iv) Genito-urinary System	<ul style="list-style-type: none"> * VDRL/RPR * Urine microscopy for haematuria, white blood cells, microorganisms.
v) Skin ◇ Rash/dermatitis/itching/scaling ◇ Herpes zoster/Herpes Simplex ◇ Abscess/boil/folliculitis ◇ Kaposi's sarcoma ◇ Discharging sinus, ulcer ◇ Mucous Membrane - ulcer	<ul style="list-style-type: none"> * Skin scrapping to rule out fungal infection * Pus examination (microscopic, culture) if indicated * Discharge swab for microscopic and culture, if indicated. * Skin biopsy * Skin scrapping
vi) Other Conditions ◇ Peripheral Oedema ◇ Pyrexia ◇ Anaemia	<ul style="list-style-type: none"> * Blood analysis for haemoglobin, Haemogram

2.3 Nursing Care Issues

Nursing care issues will depend upon the hospital policies and procedures followed in relevance to infection control and facilities available for the required investigations, treatment and nursing care. Some of the common issues are as follows:

i) Safety Precautions

The nurse has an important role in implementing (a) the hospital safety policy and adopted procedures to minimize the risk of staff being exposed to HIV in the wards, operation theatre, others departments, laboratory etc., and to prevent cross infection to the other patients in the ward, and (b) working rules based on universal and national guidelines of infection control measures, not only to prevent HIV transmission but other infections viz. Hepatitis B and Hepatitis C viruses (much more readily transmitted than HIV) too.

- Persons with HIV disease should be nursed in an common ward like any other sick person, unless they have complications.
- Wearing of plastic gloves, gowns, mask, eye protectors are necessary only when carrying out invasive procedures or when the person with HIV disease requires protection because of severe immunosuppression. Wearing of gloves when handling blood and body fluid is also a sensible practice to protect the nurse and the patient.
- Soiled linen is to be soaked in sodium hypochlorite solution for two hours before it is sent to the laundry in a plastic bag. A hot wash at 71°C for three minutes (the hot cycle of a domestic washing machine) destroys the virus. Soap and hot water wash kill HIV.
- Any blood spillage to be cleaned with a bleaching solution.
- Medical and nursing staff should use discretion for involvement of relatives in the care of a person with HIV. A relative involved in nursing care of a person with open lesion is also provided with plastic gloves and taught to protect himself from the wound discharge and any other infectious material.
- Use of disposable needles should be emphasized and practiced. The needle should be used once only. After use, the butt of the needle, while still attached to a syringe, is placed in a 'keyhole', allowing the needle to fall into the jar. These jars from the wards to be collected and emptied into a bigger jar for incineration every day.
- Every person undergoing surgery is regarded as potentially HIV carrier. Therefore, strict aseptic techniques are to be observed in the operation theatre, while dressing wounds and any other piercing procedure.
- Splashes of blood and other body fluids in the operation theatre or otherwise should be washed immediately by washing skin surface with water and soap or any antiseptic solution (available at that time).

ii) Blood Specimen Collection

In hospitals, nurses are often involved in collection of blood specimens and sending these to laboratory. If blood is taken from a person suspected of having HIV disease then the following procedures should be observed.

- a. When blood or other specimen are to be obtained, gloves and a disposable plastic apron and/

or gown must be worn and discarded safely after use. Eye protection is recommended. A small plastic sheet is to be spread under the part at the site of the prick.

- b. The minimum essential quantity of blood should be drawn only by designated staff who are trained and experienced. Those who withdraw blood or other body fluids must ensure that the outside of any specimen container is free from contamination.
- c. Disposable units must be used for blood collection. Needles must be removed from syringes before the blood is transferred into the specimen container and immediately discarded into a puncture-proof disposable bin used solely for that purpose and designed for incineration. Only needle-locking syringes or similar units should be used to aspirate fluid from patients. Accidental puncture wounds in staff must be treated immediately by encouraging bleeding and liberal washing with soap and water. Any such accident or contamination of broken skin or mucous membrane must be promptly reported to and recorded by the person with overall responsibility for the work.
- d. Specimens must not be sent to the laboratory without agreement between the clinician and senior laboratory staff. They must be in robust screw-capped and leak-proof containers bearing a hazard warning label. Securely capped specimen containers should be sent in separate sealed plastic bags kept upright, if possible, and transported to the laboratory in a sound secondary container which can be disinfected. The accompanying request forms must be kept separate from the specimen to avoid contamination and also clearly indicate the hazard. Pins, staples or metal clips must not be used to seal the bags and for safety, the carrying handles of the secondary container should not be attached to the lid.

iii) Isolation

Patients having HIV/AIDS may not need isolation except in certain conditions e.g. active tuberculosis or disseminated herpes zoster or chicken pox. Privacy is required for a patient who is terminally ill/dying.

iv) Confidentiality

All patients in care are entitled to confidentiality.

- Access to medical records of the patient should be monitored and restricted to relevant staff only.
- Identity of an infected person should not be disclosed without his or her informed consent.
- Health workers (Doctor, Nurse etc.) must know how much the other partner and family knew about the patient's life style and disease before discussing with them about the patient's sickness. This, being an emotive issue, has immense social implications for the patient.
- The nurse must have counseling skills to decide and discuss the sensitive issue of the patient's diagnosis with his/her patient's partner, family, friends, employer etc.
- The nurse must earn trust by developing rapport and maintaining necessary confidentiality.

v) Physical Care Skills

Nursing a patient with HIV disease is no different from nursing any other ill person. Sound knowledge, clinical skill and good interpersonal skills are essential for safe and effective treatment and care. It requires sensitivity to the patient's need for care. A person with painful mouth ulcers will require cleaning and fresh linen to be comfortable and a dyspnoeic person will need consistent kindness and reassurance when faced with breathing discomfort. However, individual needs will vary from simple self-care to an intensive nursing care and support. Nurses are also required to review their own feelings with regard to stigma, attached with the disease. Prejudices and fear are a hindrance to conducive and effective nursing care. Nursing care support will include support provided by the attending nursing and other medical staff, families, friends, counselors, psychologist, social services and other support groups. This should be subtle, consistent and confidential.

vi) Administration of Medical Treatment

Nurse must update herself about the treatment regimen of various opportunistic infections, malignancies and impairments. She should have knowledge of the drugs and their side effects, route of administration, and their antidotes, in case of any undesirable reaction. Timely and proper administration of medication are essential to have a desired effect.

vii) Psychological Support

Both the patient and his/her relatives, suffer the stigma of the disease and are likely to be ostracised by neighbours and colleagues. The partner may harbour the fear of developing the illness and undergo various stresses and strains. A lot of financial and other impairments and future plans have to be considered by the patient. They need support and an outlet for their fear and frustration. In such a situation, nursing personnel should provide them an opportunity to discuss the problems, express feelings and share their experience.

viii) Preparation for Discharge

A person with HIV disease has poor prognosis. Discharge plan will depend upon the degree of health problems with which the individual patient leaves the hospital. Therefore, the patient and his relations have to be prepared to take care of patient at home. They are to be informed about, the home care support, if available in the area, regular check up and continuity of treatment as prescribed. It helps the person to keep well and prolong life.

2.4 Check Your Progress - 2

- i) List two common opportunistic infections.
- ii) List common nursing care issues.

3. COMMUNITY CASE MANAGEMENT

The number of people infected with HIV and developing HIV disease is growing alarming all over the world, including India. The care and support these people would require, is bound to place considerable strain on the already over-burdened health care system. Nurses often find themselves working in overcrowded hospitals with inadequate equipment and supply available for the care. It is well established now that persons with HIV infection/AIDS do not require isolation. Rather it is the virus that is to be isolated. Increasingly, the focus is shifting on to care for people with HIV in the community itself and using the hospitals only for acute episodic illnesses. Countries like Uganda and Zambia, have developed in their hospitals, adequate home-based care units which are run by nurses. These units counsel the patient and the family while the former is in hospital and after his/her discharge. Similar coordination between the nursing personnel and community health department can be developed in our country too. Nurses can initiate development of such community based care support groups.

3.1 Concept of Case Management

Nursing care of HIV/AIDS patient includes education and counseling of the patients, their family members, members of the community, and case management. Case management may be defined as the assessment of the patient's needs by the key worker to enable the co-ordination of the resources that may be used to meet these needs. HIV/AIDS patients can be cared for in a variety of settings in the community.

i) Care in Hospital

Hospitals are ideal for investigation and treatment of acute conditions e.g. acute respiratory infections, severe diarrhoea, encephalitis etc. However, this may not be feasible for various reasons such as:

- It may not be appropriate,
- It may not be available,
- It may be too expensive,
- It may be rejected by the patient, and
- It may be too far away

ii) Care in Out Patient Clinic

An out-patient clinic can provide support to those patients who otherwise may need in-patient care in the hospital. But this too may have a number of demerits like:

- may be located too far away from home,
- may not be held regularly,

- may be expensive,
- may have long waiting time, and
- may not be available.

iii) Home-Based Care

It is often the only or most desired option available to the patient. It is a possible alternative to hospital or clinic care if:

- there is a support system to provide care, e.g. family, partner, friends, community people,
- the nurse can provide teaching and support,
- the patient prefers to spend the terminal phase of his illness at home, and
- the patient is comfortable and confident about home care

Some of the other benefits are:

- helps reduce stigma attached to the disease,
- the patient is not excluded from the community,
- helps in tracing the contacts,
- reduced pressure on hospital, and
- the patient feels more comfortable in his familiar environment.

However, some of the possible disadvantages could be:

- shortage of care-providers,
- lack of home nursing resources,
- patient may not have a home,
- places continuous demand on other family members, and
- other members of the family may also be sick or fall sick.

3.2 Nurses' Role in Community Care

A nurse is a key person in the health care team in all health care settings. She/He being in close and continued touch with the people in the community plays a very crucial role in:

- identifying people with HIV infection and referring them for diagnosis,
- providing necessary nursing care and support to the family and the individual at home,
- counseling and imparting health education i.e. required for prevention and, case management

in the community, and

- encouraging community to form a support group.

The nurse has a creative role to improvise and support nursing care in home environment, to create awareness among the people through dramas and role plays on HIV infection/disease. The major concerns of nurses relate to the issues of protection and counseling. As more and more people with HIV infection/AIDS will be cared for at home, nurses need to teach others how to care and provide a supportive environment to them. Nursing such people requires creativity, dedication and human touch.

In carrying out these multidimensional roles, it is important for the nurse to have an adequate understanding of the modes of transmission of HIV, its disease process, counseling skills and educational components required for such case management in the community. The nurse trained in home-based care is better equipped to convince her patients that HIV disease is no different than other diseases. People can live positively with HIV disease and prolong life by appropriate self-care activities

3.3 Nursing Interventions

Identification of the health problem of the people with HIV/AIDS, their diagnosis, and nursing interventions have been discussed earlier in this Module. The nurse may make suitable modifications to suit the need and home environment of the patient(s). **Table 2.5** covers the health care issues and nursing care interventions in community case management.

Table 2.5: Health Care Issues and Nursing Care Interventions in Community Case Management

Area/Health Care Issues	Nursing Interventions
1. Problems Related to the Body System ⇒ Respiratory System ◊ Dyspnoea ◊ Pain ◊ Suspicion of pulmonary TB ◊ Coughing	<ul style="list-style-type: none">* Improvise comfort devices to ease breathing.* Administration of medication, as ordered.* Refer to hospital for investigations and treatment.* Encourage to cough up sputum into a cup or earthen pot which can be covered, emptied, washed regularly and dried in the sun.
⇒ Gastro Intestinal System ◊ Diarrhoea ◊ Vomiting ◊ Oral Candidiasis, Pain	<ul style="list-style-type: none">* Rehydration with oral rehydration solution or home made salt and sugar solution* Low-fibrous food and a high-energy protein, supplement a family can afford.* Restrict oral intake for 4 to 6 hours. Start with soft/liquid small frequent feeds.* Administration of drugs as may be prescribed.

	<ul style="list-style-type: none"> * Oral Hygiene, assurance. * Drugs administration, as prescribed. * Refer to hospital in case this benefits them.
⇒ Genito-urinary System ◇ S. T. D. ◇ Pain	<ul style="list-style-type: none"> * Contact tracing. * Administration of medication, as prescribed. * Assessment of the progress of STD treatment response. * Analgesics. * Hospitalization if the patient's condition warrants.
⇒ Central Nervous System ◇ Pain ◇ Restlessness ◇ Suspicion of meningitis	<ul style="list-style-type: none"> * Provide a quiet, restful environment * Administration of analgesics or diazepam * Refer to hospital
⇒ Skin Rash ◇ Dermatitis ◇ Herpes zoster ◇ Abscess ◇ Kaposi's sarcoma ◇ Discharging anal sinus	<ul style="list-style-type: none"> * Same as in hospital * Same as in hospital * Encourage to continue treatment as prescribed or refer to doctor for treatment. * Zinc Oxide dressing as and when soiled. * Teach a family member and the patient how to apply dressing.
2. Diagnosis HIV Testing	<ul style="list-style-type: none"> * Pre and post-HIV test counseling
3. Prevention ◇ Alarming spread of HIV infection ◇ Social Stigma	<ul style="list-style-type: none"> * Education and counseling * Encourage safe use of condom
4. Pastoral Care ◇ Shame, quiet ◇ Helplessness ◇ Alienation ◇ Bitterness ◇ Depression ◇ Fear in the face of imminent ◇ Death	<ul style="list-style-type: none"> * Counseling * Drawing on spiritual resources.
5. Home Care Support ◇ Symptomatic management	<ul style="list-style-type: none"> * Training of family members in specific skills is required to care for such patients at home. * Consistent home visit to provide necessary supervision and support.

For the purpose of review, a list of drugs used for common illnesses and their possible side effects is illustrated in **Table 2.6**.

Table 2.6: List of Common Drugs Used and Their Possible Side Effects

Drugs	Action	Side Effects
Aspirin (acetylsalicylic acid)	Analgesic. antipyretic	* Dizziness, tinnitus. * Gastric irritation, Nausea, vomiting
Ferrous sulphate	Haematinic	* Gastro-intestinal upset Discolour teeth (liquid preparation). * Black stool
Hydrocortisone Cream	Steroid (anti-inflammatory)	* Nil/for restricted use
Phenargan	Anti-allergic	
Penicillin V. Tab Penicillin Syrup	Antibiotics	* Sensitivity reaction
Co-trimoxazole	Chemotherapeutic	* Nausea, vomiting * Diarrhoea * Skin rashes * Fever * Leukopenia.
Tetracycline eye ointment	Antibiotic	* Nausea, vomiting * Sore throat * Diarrhoea * Constipation.
Chloramphenicol	Powerful broad spectrum	* Bone marrow depression * Agranulocytosis, * Aplastic anaemia, * Thrombocytopenic purpura
Erythromycin	Antibiotic with spectrum	* Diarrhoea
Folic Acid	Vitamin	
Metronidazole	Nitrofurans effective against many protozoa and bacteria	* Nausea
Gentian Violet Paint	Antihelminthic & anti-fungal	* Not known
Bismuth-subsalicylate	Antidiarrhoea	* Constipation
Magnesium	Anti-acid	* Constipation

Chloroquine	Antimalarial	<ul style="list-style-type: none"> • Relatively non-toxic, vomiting • Occasionally may cause headache • Pruritus • G.I. disturbances • Blurring of vision
Multi Vitamins	Vitamin	<ul style="list-style-type: none"> • G.I. disturbances • Nausea
Frusemide (Lasix)	Diuresis	<ul style="list-style-type: none"> • Likelihood of electrolyte imbalance
Diazepam	Tranquilizer	<ul style="list-style-type: none"> • Drug depression
Paracetamol tablets, Syrup	Analgesic	<ul style="list-style-type: none"> • Nil
Salbutamol Tablets	Bronchodilator	<ul style="list-style-type: none"> • Mild
Nystatin (suspension tablets)	Fungicides	<ul style="list-style-type: none"> • Diarrhoea
Electrolytes Oral Packets	Replace lost electrolytes	

4. CASE STUDY OF SYMPTOMATIC HIV DISEASE

Case study is a patient-centred method of learning about his/her total health care needs and provide care for meeting these needs.

In this section, participants are provided with a case presentation which raises the major issues that they would come across when caring for a person with HIV disease. The case of Mrs S is illustrated below in four parts:

4.1 Part-A

Mrs S, 28, lives with her husband and three children in a village near a large city. Her husband is a truck driver who is away from home 3-4 days a week. Her mother lives nearby. She is not keeping well for the past one year and her mother is frequently required to take care of the two younger children during the day and the elder child after school. She has no appetite, has had repeated episodes of cough and haemoptysis and has gradually lost 10 kg of weight. She has fever nearly every evening and wakes up at night drenched with sweat. This week, she has white patches in her mouth and a sore throat. When she swallows, she has a burning feeling in her chest just beneath the sternum. She is dehydrated. You are seeing her at the Primary Health Centre.

- Mrs. S is a high risk case to contract HIV infection from her husband.
- She represents ARC viz.
 - Cardinal sign in her case is oesophageal candidiasis.
 - Characteristic symptom is oral thrush.
 - Associated symptoms are: weight loss, cough, fever, excessive sweating, dehydration.
- She requires hospitalization to relieve her symptoms and confirm diagnosis suspicion.
- Additional information is required about her husband's extra marital relations and health, and also health status of the three children.

4.2 Part-B

Mrs. S is admitted to the hospital and rehydrated. A scrapping of her tongue reveals oral candidiasis. The doctor thinks that burning in her chest and difficulty in swallowing is because of oesophageal candidiasis. Nystatin tablets are prescribed and she is also given Nystatin Suspension to swill around her mouth for the oral candidiasis.

Sputum specimens show acid fast bacilli (AFB). Doctor asks Mrs. S for consent to have a blood test for HIV antibodies and explains, the reasons why he feels this test is necessary. He also explains to her what a positive and a negative result might mean. After deliberating on the advise for a while, she agrees to have the test. This test is positive for HIV antibodies. A chest X-ray reveals B/L pulmonary tuberculosis. The doctor writes four anti tubercular drugs in his chart and asks you to accompany him when he tells Mrs S. that her diagnosis is HIV disease. She is extremely worried and wants her mother contacted immediately.

- Diagnosis in Mrs. S's case was established through HIV serology, mouth scrapping, blood studies, X-ray chest, sputum for AFB.
- Counseling was a pre-requisite for HIV testing.
- Disclosing diagnosis to Mrs. S was frightening to her and required immediate family support.
- Nystatin tablets and suspension (for oral swill) were prescribed for the treatment of candidiasis.
- An anti tubercular regime as per standard was prescribed.
- She needs nursing support to accept the disease and improve her general health.

4.3 Part-C

Mrs S has received the medications for four weeks. The candidiasis is no longer a problem and the fever and cough is much better. She has gained 5 kilograms of weight and is feeling much stronger. The doctor is ready to discharge her. She is to continue taking medication for TB and to continue to use the Nystatin suspension to keep her oral candidiasis under control. Mrs S says she is worried that she will infect her children or that her neighbours will tell her to leave the village.

- Mrs. S has improved. She can be at home.
- She needs to continue medicine at home as prescribed and come for follow-up.
- She is to be encouraged to allay her fear of infecting her family members and rejection by the villagers. Accordingly, information about safe sex, hugging, dry kissing, food, bathing etc. should be given as these do not transfer the disease.
- Besides, a family and community counseling-cum-health education programme needs to be planned to explain how to live positively with HIV infection and prolong life through effective community care.

4.4 Part-D

Mrs. S returns home and her condition is stable for two months. She started losing weight again, felt weak and has developed watery diarrhoea. You make a home visit from the clinic. Mrs. S does not want to return to the hospital because traveling to and from the Clinic has been very hard on her husband (who is now also unwell) and her mother. She thinks she will probably die and cries when she thinks of leaving her children and her husband behind. She wonders what will happen to her children if her husband (who she thinks also has HIV disease) dies, because her mother is too old to take care of the family.

- Mrs. S's disease is aggravating.
- She has genuine fears and difficulties.
- She needs support for her physical care at home i.e. a regular home visit from a health worker.
- Emotional support to the family to accept the situation.
- The nurse to persuade the family for support to an orphanage, S. O. S. organization etc. where children can be looked after, and AIDS societies or groups where the family can share their difficulties with strength in the presence of fellow sufferers. (Refer Exhibit 2.2 for Question – Answers for the Case studies).

4.5 Check Your Progress

- (i) What is the case study method?
- (ii) Please refer to the case of Mrs. S in the content and answer the following questions:
 - a. Why is Mrs S's husband at high risk to contract HIV infection?
 - b. What were the apparent reasons for her gradual weight loss?
- (iii) On your visit you found Mrs S dehydrated. What nursing intervention would you plan for her care at home?

ANSWERS TO CHECK YOUR PROGRESS

- | Q | A |
|----------|--|
| 1. 3 | (1) |
| a. | T |
| b. | F |
| (2.4 i) | <ul style="list-style-type: none">a. Pneumocystis carinii pneumoniab. Kaposi's sarcoma |
| (2.4 ii) | <ul style="list-style-type: none">a. Safety precautionsb. Blood specimen collectionc. Isolationd. Confidentialitye. Physical Care skills |
| (4.5 i) | Case study is a patient-centred method of learning about his/her total health care needs. |
| (4.5 ii) | <ul style="list-style-type: none">a. Because he is a truck driver and stays away for 3-4 days in a week, he is likely to have a promiscuous behaviour.b. Loss of appetite, fever and cough? Pul. TBc. Intestinal parasites |

(4.5 iii)

Health Problem	Nursing Intervention
<ul style="list-style-type: none">• Diarrhoea• Loss of appetite	<ul style="list-style-type: none">• Assessment of the degree of dehydration.• Rehydration with oral rehydration solution or home-available fluids• Frequent mouth cleaning and saline mouth wash• Low fibrous and high-energy food supplement Mrs S can afford• Small frequent feeds• Administration of anti-diarrhoeal drugs Refer to health clinic/hospital for further investigation and treatment

Exhibit 2.1
Opportunistic Disease and Health Problems

Disease	Actual Health Problems	Potential Health Problems
<ul style="list-style-type: none"> ◊ Pulmonary tuberculosis ◊ Pneumocystis carinii pneumonia ◊ Interstitial pneumonitis 	<ul style="list-style-type: none"> • Dry non-productive cough • Pyrexia • Chest pain relieved on sitting • Night sweat • Anorexia, weight loss • Oral thrush, dysphasia 	<ul style="list-style-type: none"> • Cachexia • Malaise, weight loss • Dyspnoea • Cyanosis • Distention of abdomen
◊ Candidiasis (oral and oesophageal)	<ul style="list-style-type: none"> • Dysphasia • Odynophagia • Bad taste 	<ul style="list-style-type: none"> • Nausea, vomiting • Anorexia
◊ Kaposi's sarcoma	<ul style="list-style-type: none"> • Functional impairment: <ul style="list-style-type: none"> - inability to chew food - painful sole of the foot Oedema 	<ul style="list-style-type: none"> • Functional impairment increases.
◊ Recurrent bacterial/viral infections	<ul style="list-style-type: none"> • Fever • Diarrhoea • Generalised malaise • Headache • Pain • Cough • Discomfort 	<ul style="list-style-type: none"> • These problems persist and patient progressively becomes seriously ill. • Dependency level increases.
◊ Herpes zoster	<ul style="list-style-type: none"> • Small blister on the waistline <ul style="list-style-type: none"> - Discomfort - Itching - Severe pain 	<ul style="list-style-type: none"> • Sloughing • Exhaustion in elderly weak person • Death
◊ Generalised Lymphadenopathy	<ul style="list-style-type: none"> • Papulosquamous skin rash • Genital ulcer • Fever • Weight loss • Enlarged and tender lymphnodes Preparation for biopsy 	<ul style="list-style-type: none"> • These problems get aggravated • Oedema
◊ Neurological Impairment	<ul style="list-style-type: none"> • Withdrawn, angry, fearful, desperate • Mild/moderate forgetfulness • Slowness • Poor concentration • Confused • Tremor • Body imbalance 	<ul style="list-style-type: none"> • Dementia • Delirium • Ataxia • Saccadic eye movements • Dependent • Disorientation • Suicide tendency

Disease	Actual Health Problems	Potential Health Problems
	<ul style="list-style-type: none"> • Hypertonia/generalized hyper-reflexia • Spastic • Weak • Jaw jerk • Depression • Anxious • Somatic pains 	
◊ Wasting Disease(Slim)	<ul style="list-style-type: none"> • Weakness in affected part • Atrophy of the part • Vacant look • Absence of normal expression • Fatigue • Difficulty in performing daily living activities (hair combing, shaving etc.) • Unable to keep eye lids open, close mouth, chew, swallow 	<ul style="list-style-type: none"> • Exhaustion • Unable to breath
◊ Gastrointestinal Infection e.g. Cryptosporidium	<ul style="list-style-type: none"> • Diarrhoea • Dehydration 	<ul style="list-style-type: none"> • Relapse/chronic diarrhoea • Anuria • Collapse
◊ Neurological Infections e.g. <ul style="list-style-type: none"> • Cryptococcus neoformans, • Toxoplasma gondii 	<ul style="list-style-type: none"> • Restless, irritable • Headache • High fever • Short-term memory loss • Hemiplegia • Trembling 	<ul style="list-style-type: none"> • Delirium • Dementia
◊ Lymphoma	<ul style="list-style-type: none"> • Enlargement of lymph glands • Fever • Excessive diaphoresis (Perspiration) • Pruritus • Anorexia • Weight loss • Weakness 	<ul style="list-style-type: none"> • Intercurrent infections • Disease aggravates • Pressure on adjacent organ • Anaemia
◊ CMV infection	<ul style="list-style-type: none"> • Diarrhoea • Eye inflammation (Retinitis) • Fever • Dyspnoea • Pain • Weight loss 	<ul style="list-style-type: none"> • Severe multiple neuropathy

Exhibit 2.2

Case Study

Group-I

Part-A

For case information refer 4. 1, Part A and identify the nursing care needs of Mrs S.

Questions

1. What additional information do you think you need to ask Mrs S in order to decide what interventions to take?
2. What do you suspect is the underlying medical reason for Mrs S's several other problems?
3. What nursing support would Mrs S require in relation to any potential emotional or social issues she may have to cope with?
4. What referrals or further investigations might be appropriate and available?

Answers

1. Additional information about her husband or her extra-marital relation, if any. State of health of her children, husband, knowledge of HIV infection.
2. Mrs S represents an pre AIDS-related syndrome which is suggestive of HIV infection in its third stage.
3. Mrs S also requires to be investigated to rule out the cause of her varied symptom and also HIV infection. She would specially require to accept the possibility of suffering from HIV infection and its related issues of social isolation, impact of the incurable and infectious nature of the disease.
4. She needs hospitalization for investigation of her sputum, blood and X-ray chest to rule out any other active infection, also to confirm presence of HIV infection.

Group-2

For case information refer 4.2, Part-B and identify the nursing care needs of Mrs S

Questions

1. What specific information indicates to the doctor that Mrs S has HIV disease?
2. What should the nurse know about the administration and possible side effects of the medications prescribed by the doctor?
3. What counseling interventions will you plan to help Mrs S cope with her diagnosis?
4. What are educational needs in relation to her anaemia and weight loss and how will you plan to help meet these needs?

Answers

1. Presence of HIV antibodies in the blood confirms that Mrs S is suffering from HIV disease. She also represents opportunistic diseases associated with HIV infection.
2. The nurse should observe the rules of administering drug as per prescription. Mrs S is prescribed the anti tubercular drugs and possibility of having hepatic damage by these drugs must always be kept in mind.
3. Pre and post-HIV testing counseling itself forms the basis of accepting the disease. She is provided with opportunities for free expression of her fear and helped to accept the sickness, enforce positive living with HIV.
4. Anaemia and weight loss Mrs S is having are due to TB, inadequate food intake because of oral thrush. Her educational needs are to maintain oral hygiene and to eat balanced food rich in iron and protein contents.
5. Encourage her to take medication regularly as prescribed by the doctor.
 - Maintain proper oral hygiene, using Nystatin swill to relieve oral discomfort and facilitate oral food.
 - Discuss and help the patient to balance her diet with iron, protein-rich food and low-fibrous content, what she can afford.
 - Consider her likes and dislikes for food and teach her how food can be made palatable.
 - Explain the importance of eating sufficient food. Frequent and small feeds can be suggested.
 - Weight check, weekly.

Group-3

For case information refer 4.3, Part -C and identify the care needs of Mrs S.

Questions

1. What are the educational needs of Mrs S prior to effecting her safe discharge and how will the nurse meet these needs?
2. Mrs S is particularly worried about infecting her children and husband and asks the nurse if it is safe to cook for her family and can she still have sexual relations with her husband? How does the nurse respond?
3. Is there anything the nurse can do to help Mrs S in relation to her fears that neighbours will reject her and force her to leave the village?

Answers

1. Educational needs of Mrs S will be to accept the continuity of her ailment which may worsen.

She is to be explained the benefits of taking medicine regularly as prescribed and to report for regular follow-up as advised.

2. Prevent herself from injury/infection. See that any piercing article used by her without proper sterilization is not used for others' piercing procedures. Eating a balanced diet, maintaining good personal hygiene, she is required to be followed at home, she may also be helped to express any disturbing thoughts she had about her own care and also about transmitting infection to her family members. Accordingly, these be clarified. The nurse appreciates and respects the expression of Mrs S's feelings as genuine. Nurses need to explain to her the mode of transmission of this infection and also stress that normal casual contacts do not transmit HIV e.g. hugging, dry kissing, food, bathing etc. Thus, she can take usual care of her children at home. She can also have normal sex relations with her husband and for her safety should use a fresh condom every time she has sex.
3. The nurse organizes family and community counseling-cum-health programme, and stress on the importance of family and community support in HIV infection. She also involves the community and plans a programme to highlight how to live positively with HIV infection and prolong life through effective community care. Refer Module-3.

Group-4

For case information refer 4.4, Part-D and identify the nursing care needs of Mrs S.

Questions

1. What can you teach Mrs S's mother and husband to enable them to care for her at home?
2. What are you able to do to provide emotional support for Mrs S?
3. What will you tell her when she asks you to help explain to her husband that she knows she is going to die and wants to die at home?
4. What Support is available locally to Mrs S to die at home?
5. What resources are locally available to care for Mrs S's children if her husband becomes ill and also dies and her mother is no longer able to cope?

Answers

1. Mrs S's mother and husband are to be explained the importance of home at this stage of her sickness. She requires rest and they need to assist her in daily living activities. They are taught how to meet her daily physical needs, safe disposal of body discharge; balanced food; listen and provide necessary support to her discomforting feelings.
2. Respect her expression of emotions to be cared at home and help her to cope with these. She is nearing her end stage and it will be comforting to share her last moments with the family.
3. Her views to die at home are genuine. She is encouraged to discuss this with her husband and mother too. The nurse can also make herself available to lead the discussion.

4. She has her family and other relations, and spiritual leaders who would share their concern for peaceful death and performing last rites according to her belief.
5. The nurse is aware of the difficulties children will have to face after the death of their parents. She, during her later visit, links this family for support to orphanage, other social organizations/societies who look after such needy children. She also links the family with AIDS societies or groups available where family members can share their difficulties and gain strength with fellow sufferers.

Chapter 3

IMPACT OF HIV INFECTION AND HIV-RELATED ILLNESS ON WOMEN

OVERVIEW

On completion of this module, the participant will have gained an understanding of the possible risks of HIV infection to women and acquired an ability to identify their pre- and post-natal needs with regard to care, counseling and health education. The participants will also have understood the need for applying safe working practices to prevent the spread of the infection to others and for their own protection.

OBJECTIVES

1. to describe the influences in the society which may put women at the risk of acquiring HIV disease,
2. to identify the risk of HIV infection to which a woman and her unborn child may be exposed,
3. to discuss the health education and counseling needs of women who may be at the risk of the infection,
4. to describe the effects of HIV infection and related disease on a pregnant woman and her unborn baby,
5. to implement safe practices related to the care of women during pregnancy and childbirth in any setting, and to develop teaching strategies for traditional birth attendants and pregnant women, related to reducing the risk of infection.

INTRODUCTION

As with other sexually transmitted diseases, women are more likely to get HIV from infected men than to infect their male partners. Women constitute one-third of the estimated 30.6 million HIV infected persons in the world. Over 80 percent of HIV infected women live in developing countries and have limited access to MCH/FP services.

In India, where heterosexual transmission appears to be the major route of the spread of the infection and with an high birth rate, perinatal transmission is likely to become more common. Further, HIV infection due to blood transfusion of unscreened blood/blood products received by the women due to certain complications arising during pregnancy and child birth, results in a steep rise in HIV infection in women.

This module addresses the particular risks of HIV infection which women may face and their vulnerability due to their role and status in the society. It describes the effect of HIV disease on

pregnancy and childbirth and on the new born. Further, it lays emphasis on the methods for provision of appropriate MCH care, including Family Planning Care, to all the women by health workers. Obviously, health workers would have to play a very crucial role in controlling the spread of HIV infection.

CONTENT

1. Women's status in society and vulnerability to HIV infection.
2. Pregnant women and HIV disease.
3. Safe working practices during childbirth.
4. Counseling and health education needs of the women.

1. WOMEN'S STATUS IN SOCIETY AND THEIR VULNERABILITY TO HIV INFECTION

1.1 Status and Role of Women

Women's status has an important and direct influence on their vulnerability to HIV infection. Their low status begins from the very childhood. A girl child has to help the mother in fetching water, preparing food, looking after her younger sisters and brothers. She has to discontinue going to school, if there is extra work at home. Despite all that what she does, she still remains a liability to the family. They say, "why educate her when she is going to be taken away by somebody else"?

In fact, women carry a much greater burden than men in terms of social and cultural expectations and their role as the care-takers/givers of the whole family. Women provide active support to men in overall management of family life, but in return they do not get due recognition and status. In view of their low status women are exposed to various factors which increase their vulnerability to HIV infection and HIV-related diseases.

1.2 Factors Affecting Women's Vulnerability to HIV Infection

i) Socio-Cultural Factors

There is a very close linkage between health and socio-cultural factors. Some of these factors are highlighted.

a. Role as Caretaker/care giver

Women are burdened with domestic chores and child-care responsibilities. They are often absorbed in the struggle to sustain the family physically and emotionally. They are discouraged even from taking an interest in the outside activities, let alone participating in them.

b. Nutritional factors

Traditionally, a woman in the family is the last person to eat or she gets the leftovers. Nutritional taboos are forced on her. This lowers her resistance to fight infections. These taboos are more common during menstruation, pregnancy and lactation when the woman requires extra nourishment. This increases her vulnerability to HIV/AIDS.

c. Lack of power and limited control over personal and sexual relationship

Women are often unable to discuss sexual matters with their male partners as socially it is not acceptable. Even if a woman knows how to protect herself from infection by use of condom or other safe sexual practices, she fears violence or rejection from her male partner. Sometimes the life-threatening nature of AIDS may not be sufficient to overcome these inhibitions leading to increased anxiety in women.

d. Lack of Sex Education and Awareness of HIV/AIDS

Sex education is scanty and overemphasized with the expectations of virginity. During the adolescent period, the girls are anxious to know about sex, but the parents consider talking about sex a taboo. When they get married, sex becomes a part of their life to which they must submit. Sex is something which happens to them in the dark and in silence. They are ignorant of sexual transmission of HIV infection and are at high risk of getting infected.

Sometimes HIV positive woman prefer first pregnancy to abortion as this proves her fertility. She also consider the risk of rejection by society/family, especially her husband if she refuse to bear him children. She almost feels normal. So, she decides to take the risk of infecting the baby, a 30 to 50 per cent risk.

e. Polygamy and Wife Sharing

Wife sharing by men results in women having multiple sex partners thereby increasing their vulnerability to infection.

ii) Economic Factors

Women are financially dependent on men. They fear of being thrown out and disowned if they talk about the use of safe sex practice to reduce the risk of infection. Sometimes, unemployment, poverty added with the responsibility of taking care of her children or siblings drive her to become a commercial sex worker. Her risk of acquiring HIV infection greatly increases.

a. Increased Risk of Infection from Man to Woman

Some studies have suggested that in the absence of other risk factors, HIV transmission from man to woman occurs more readily than vice versa.

b. Genital Warts/Ulcers

Genital ulcers are believed to facilitate HIV transmission between sexual partners. In men these are easily detected, but in women, internal ulcers or inflammation may leave them unaware of their increased risk. Even the minute abrasion in the vaginal mucosa caused during the sexual intercourse can facilitate HIV transmission.

c. Intra-uterine Contraceptive Devices (IUCD):

Intra-uterine contraceptive devices sometime cause localised inflammation leading to pelvic infection. Scientists believe that such inflammatory disease increases the risk of contracting HIV through sex. WHO recommends that IUCD should not be a method of choice for women at risk for STDs, including HIV, and for women who are HIV positive.

d. Risk of Infection through Blood Transfusion

During child-birth, women develop severe anaemia because of excessive blood loss, due to poor nutrition, lack of adequate antenatal care and poor accessibility to health facilities.

Often they require blood transfusion and face the risk of acquiring HIV and other infections from contaminated blood. The blood either may not have been screened or if screened, there always remains a possibility of false negative results.

1.3. Check Your Progress – I

- i) List the factors that influence woman's role and status in society and also increase her vulnerability to HIV infection.

2. PREGNANT WOMAN AND HIV DISEASE

In this part we shall briefly discuss the mode of perinatal transmission and effect of HIV infection on the mother and her child and issues related to the care of a HIV sero-positive pregnant woman/women exposed to the risk of HIV infection. We shall also discuss the impact of HIV/AIDS on M C.H. and Family Planning services and the service providers.

2.1 Impact of HIV Infection in Pregnancy

i) Impact on Foetus/Infant

An HIV-infected mother can transmit the virus to her child before, during or shortly after birth. Transmission from an infected mother to her unborn child occurs as HIV crosses the placental barrier. Current data suggest that the risk of an HIV positive mother infecting her unborn child is approximately 30 percent. HIV transmission can also occur through breast milk, if mother has high titre of HIV in her blood.

For children, HIV infection has a rapidly fatal course. Half of the infected children die within two years and 90 percent of the rest within five years. Uninfected children born to infected mothers become orphans early in their childhood.

ii) Impact on maternity Cycle

HIV infection does not have any adverse effect on the course of pregnancy, delivery, puerperium or lactation. Similarly, pregnancy does not affect the course of HIV infection. But maternal HIV infection, if associated with other contributory factors such as any systemic diseases like anaemia or smoking and drug addiction, can lead to intrauterine foetal growth retardation, premature delivery or abortion.

2.2 Care of Women at Risk of HIV/Seropositive Women

Often, women who are at risk, have limited access to counseling facilities and become pregnant before their initial contact with a nurse or health care worker. Sometimes HIV testing facility is not available within accessible distance. At times when HIV test is possible, the HIV positive women may wish to continue their pregnancy. In such situations nurses and health workers need to provide informed support, adequate and appropriate care throughout the maternity cycle.

i) Objective of Care

- Help the women/family to make the right choice between termination of pregnancy or its continuation.
- Provide care to the woman during pregnancy and childbirth.
- Promote contraception to avoid future pregnancies and prevent HIV transmission.

ii) Choice between Medical Termination of Pregnancy or its Continuation

The fate of the unborn child is the major reason for the concern about pregnancy in women at risk and in HIV seropositive women. Medical termination of pregnancy (MTP) in the first trimester may be advisable. The nurse should inform the mother about it, share her ideas and concerns and help her to take the right decision. Involve the family, especially the husband, and explain the risk of HIV transmission to the child. Providing information will help the family to make the correct choice. Women who desire to continue pregnancy should be provided with appropriate antenatal, intranatal and postnatal care.

iii) Care during Pregnancy and Childbirth

Objectives and principles of care during pregnancy and childbirth are the same as those of normal pregnancy and childbirth. However, there are some specific concerns and issues which require extra care and are discussed below:

a. Emotional Support

Pregnancy in normal circumstances produces a certain degree of emotional turmoil in the mind of the woman. If a woman learns that she is HIV positive, it creates all the more fears and various emotional reactions. Adequate support is necessary to help the mother to take a decision after consultation and cooperation of the rest of the family members regarding the care if the pregnancy is to be continued. Fears can be overcome by reposing confidence in health workers. The woman needs to be explained in simple language about vertical transmission of HIV infection and how she can help herself. This will give her confidence in her ability to cope with the situation.

b. Care During Pregnancy

A seropositive pregnant woman needs careful observation and adequate care throughout the pregnancy. The routine antenatal care given can miss some of the problems which may put the mother and the foetus to further risk conditions. One should use his/her past experience of antenatal care to plan and provide special care to the HIV seropositive pregnant woman/pregnant woman at risk.

She should be apprised of the importance of antenatal clinic visits at regular intervals. These are essential to make assessment of health status of the mother and foetus. These visits should be planned for at least twice a month in the 1st and 2nd trimester and once a week during the 3rd trimester. During these visits her history should be recorded carefully, complete physical and obstetrical examination should be conducted. All the routine and specific laboratory tests required for a high risk pregnant woman should be carried out. If she needs intensive bed side care, she should be admitted to the hospital for treatment.

- Nurse should advise the pregnant woman on the importance of nutrition and diet to promote and maintain her health. She should be advised a diet that would provide her extra calories, proteins, minerals and vitamins required during pregnancy. If she is anaemic, an oral iron therapy may not be tolerated by her, she may be given iron through parental route. She should also be advised to take plenty of water and other fluids.
- She should not be fatigued. Rest and sleep must be adequate. If she is a working woman, she should stop working for two months before her due date. She should also undertake mild exercises like walk in the open air in the morning and evening.
- She should be advised to maintain personal hygiene by taking daily bath and change of clothes at least once a day. Special advice on perineal hygiene must be given.
- She should be warned against smoking and taking any drugs without the doctor's advice.
- Strict use of condom must be advised.

- Sexual intercourse should be avoided during the third trimester. Immunization against tetanus should be given as per the doctor's advice.
- She should be educated on family planning methods and avoidance of any future pregnancies. This is the period when she is very sensitive and can be easily motivated to accept your advice.
- She may need your help and encouragement to deal with the situation, specially regarding the care of the new born. Her confidence needs to be built up towards accepting the inevitable. Knowledge given during antenatal period will prepare her to understand the situation more clearly.
- You should make her aware of the warning signals for reporting to the hospital such as any vaginal discharge, consistent headache, blurred vision, diarrhoea etc. Premature rupture of membrane should be prevented as amniotic fluid contains HIV.
- If she experiences contractions or vaginal bleeding, she should report immediately.
- She should be provided guidance on the preparation for delivery and the place of delivery.
- Universal precautions must be observed strictly while taking care of a seropositive woman/pregnant mother.
- Good antenatal care should be provided to minimise the need for blood transfusion during pregnancy and delivery.

Care During Labor and Delivery:

It must be remembered that the birth of a baby is an event. For a HIV seropositive mother it may still be a very trying ordeal. The attitude of the health worker conducting delivery plays an important part in influencing the woman to cope with the situation. The woman who may be irritable and worried should be handled tactfully. Sometimes the woman may not be having the support of the family or she may be a single mother. The health worker should demonstrate the caring attitude and help the woman not to be disheartened and apprehensive. Some of the basic requirements during delivery will be:

- Emotional support
- Companionship
- Adequate communication
- Peaceful atmosphere
- relief of pain
- provision of comfort

- competent observation
- skillful handling of the delivery

During delivery, observe universal precautions i.e. the use of gloves, gowns, mask and eye protectors, as there are chances of spill/splashes of body fluids (also refer Section 6 of this module). Other universal precautions to prevent the spread of HIV infection must be strictly observed throughout the procedure.

During the second stage of labor, a well timed episiotomy is advised, when indicated. The third stage of labor includes efficient management of delivery viz. repairing of episiotomy and lacerations. This will help in reducing the blood loss and the need for blood transfusion.

Acute blood loss should be managed when feasible, through the use of normal saline and plasma expanders rather than packed red blood cells or whole blood. The plasma expanders are safer, less expensive and transfuse easily.

d. Care During Postnatal Period

During the fourth stage of labor (the immediate postnatal period) chances of hemorrhage are very high. As such one needs to be very vigilant. Give post-natal care as usual with special emphasis on guidance and counseling.

e. Breast-Feeding

Breast-feeding is essential for the infant's survival and growth. Although HIV has been isolated from mother's milk, transmission of HIV infection through mother's milk is not common. Keeping in view the overall advantages of breast feeding to the infant and mothers, the mother should be encouraged to continue breast feeding. In a situation where a mother is known to be HIV positive, the additional risk of the infant dying, if not breast fed should be compared with the infant's risk of becoming HIV infected through breast feeding. In developing countries where use of safe and effective alternatives are not readily available, breast feeding is the only choice. However, it is advisable that in case of HIV positive mother, efforts should be made to identify and provide substitutes to breast feeds in order to contain HIV transmission through breast milk.

iv) HIV Infection and Contraception

Correct and consistent use of latex condom minimises the risk of pregnancy as well as HIV infection. It is essential to provide safe, effective and suitable contraceptive care to all HIV infected women to prevent HIV transmission. The choice should depend on i) the risk and benefits of the contraceptive method, ii) preference of the couple, iii) availability of contraceptives and iv) health-care facilities. However, the use of other methods may prevent perinatal transmission by avoiding pregnancy, but not sexual transmission. Therefore, it is important that you must advise

the woman/couple to use condom consistently and correctly in addition to the use of contraceptive of their choice.

Effective use of condom means:

- keeping a supply of condoms readily available
- storing them in a cool dry place/check expiry
- opening the pack carefully without tearing,
- proper use by the male partner, and
- using the condom only once and disposing it off by wrapping, and burying in a pit, latrine or by flushing in the toilet.

2.3 Check Your Progress - 2

- i) List the objectives of care of a HIV seropositive pregnant woman/pregnant woman at risk.

- ii) List the warning signals about which the pregnant woman should be alert and report.

- iii) What are the barrier devices which need to be used while delivering a baby?

- iv) Should seropositive women breast-feed? Explain.

3. SAFE WORKING PRACTICES DURING CHILD BIRTH

You have learnt about various modes/routes of HIV transmission. You have also learnt that parenteral transmission occurs from patient to patient or patient to health worker or vice-versa accidentally by exposure to blood and other body fluids of the HIV infected person or by injury with a contaminated needle or any sharp instrument. However, if proper care is taken, chances of HIV transmission through this route of can be minimised.

3.1 Need and Importance for Safe Working Practices

You know that the process of labor and delivery involves extensive contact with the blood and other body fluids of the mother. This entails the risk of HIV infection. As the number of HIV infected individuals increases, the chances of MCH/FP workers coming in contact with the infected mothers will also increase. It will not be possible to distinguish an HIV Infected mother from the one not infected. Therefore, it is important to consider all the patients as potentially infected with HIV. The use of universal precautions(refer Section 7 of this module) will ensure that HIV is not transmitted to a health care worker or to other patients. It is important to remember that universal precautions are essential for reinforcement and strengthening of routine infection control measures practiced in health care setting.

3.2 Safe Working Practice (Also refer Section 7 of this Module)

i) Use of Protective Barrier

All of us use some type of protective barrier to prevent exposure to infection while performing certain procedures for the patients. Since there is a chance of contact with the body fluids like blood, amniotic fluid, vaginal secretions, the use of the following protective barriers is advisable:

a. Gloves: Use sterile gloves while:-

- touching body fluids, mucous membrane, non-intact skin,
- doing vaginal examination,
- performing episiotomy, conducting delivery, disposal of placenta, cutting the cord,
- suturing of episiotomy, perineal tears or lacerations, handling the baby, and
- handling contaminated instruments and needles, collecting blood specimen, starting IV infusions.

Remember:

- Gloves must be changed after attending to each patient.

- Sterilize latex gloves after each use.
- Use double gloves where there is danger of it being punctured or torn.
- Wash hands immediately with soap and water after removing the gloves.
- If gloves are too expensive or in short supply, plastic bags, moist-resistant paper or other protective material can be used.

b. Use of Gowns, Mask Apron, Eye Cover and Foot Cover

These barriers are used while performing procedures that are likely to cause splashes of blood or other body fluids such as in artificial rupture of membrane, delivery by Cesarean section, clamping and cutting the cord and wiping off the amniotic and body fluids from the newborn.

ii) Prevention of Skin-Piercing Injuries

Follow the procedures mentioned below to avoid injuries caused by needles, scissors, scalp and other sharp instruments.

- After use, needles should be handled as little as possible to prevent a needle-stick injury.
- When using disposable needles, do not replace the covers (caps) before disposing them off.
- Immediately after use, place needles, scalpel, blades and other, sharp objects in puncture proof containers or trays (located as close as possible to the work area) containing a disinfectant.
- If a needle-stick injury occurs, encourage the skin puncture to bleed in an attempt to discharge any material deposited in the wound.
- Wash the wound thoroughly with soap and water and cover with dressing.

iii) Precautions for Care of the newborn

The universal precautions for blood, other body fluids containing visible blood, amniotic fluid, apply in the care of the newborn as well. Like all the adult patients, the newborn also should be considered potentially infectious. The newborn demands special care as follows:

- Continue to wear sterile gloves and protective clothing worn for conducting a delivery i.e. gown, plastic apron, gloves, mask while wiping the blood and amniotic fluids off the baby and while cutting the cord. Note that delayed cord clamping reduces splashes of blood.
- Wear gloves and gown till you have completed the first bath of the newborn.

- Use a syringe and needle to collect cord blood to avoid spilling on the outside of the specimen bottle. Be sure that rubber stopper is securely fastened on the specimen bottle to avoid spills.
- Provide cord care with alcohol.
- Use equipment with suction devices when available. Use mucous catheter or extractor with a trap when mouth suction cannot be avoided.
- Masks used for bag to mask or mouth to mask resuscitation of infants should have a blow-off valve.
- Equipment used for clamping and cutting the cord and for resuscitation should be cleaned with soap and water and sterilized before use.
- Other body fluids which include colostrum, breast milk, faeces, nasal secretions, tears, sweat, urine, vomitus have not been commonly associated with HIV transmission in health care setting unless they contain visible blood. Some of these fluids and excretions represent a potential source for nosocomial community acquired infections with other pathogens and, therefore, observe universal precautions while handling them.

iv) Environmental Precautions

These are the actions which MCH/FP service providers need to follow to prevent HIV transmission in the health care settings. It is important to observe the following environmental precautions:

- Spills of blood and other Body Fluids- The delivery room or patient-care area, where there are spills of blood and other body fluids, should be flooded with a disinfectant, such as sodium hypochlorite in 1: 10 dilution with water or 1% solution of bleaching powder. The mixed body fluid and disinfectant should be removed after half an hour and the surface should be wiped off with the disinfectant.
- Gloves should be worn, during cleaning and decontamination procedures. Do not use torn or cracked gloves.
- Hands should be washed thoroughly with soap and water after the procedure.

v) Handling of Soiled Linen

- Wear gloves while handling soiled linen.
- Put the soiled linen in a bag at the place where it is used or in the bucket containing 1% solution of bleaching powder.
- Do not sort out or rinse the soiled linen in the patient care area.
- Soak the soiled linen for 30 minutes in 1% solution of bleaching powder and then wash with soap and hot water.

- Dispose of infected waste, body fluids and disposable equipment by incineration, burying or disposal in a pit latrine.

(vi) Sterilization and Autoclaving (Refer Section 7 of this Module)

For this procedure follow universal guidelines for sterilising different articles used during the labor and delivery and postnatal care.

3.3 Check Your Progress - 3

i) How would you prevent skin-piercing injuries?

ii) How Would you handle the following:

- Spills of blood and body fluids on the floor

- Soiled linen

4. HEALTH EDUCATION AND COUNSELING NEEDS OF WOMEN

HIV/AIDS, at present, is incurable, but transmission of HIV is preventable. Therefore, education and counseling form an important component for HIV/AIDS prevention and management.

4.1 Health Education for HIV/AIDS Prevention

i) **Why should health education be provided?**

Prevention of transmission of HIV requires every individual to take a decision to modify his/her behaviour. Therefore, it is necessary that nurses engaged in MCH and FP services, should give necessary health education not only to women but also to the entire family and

community at large. The aim of health education in HIV/AIDS prevention should be to modify risk behaviour, reduce the risk of exposure and transmission, and help diminish psychosocial stress.

Who should receive Health Education?

- Women of reproductive age group so as to prevent sexual and perinatal transmission;
- Men, because one of the best methods to prevent sexual transmission of HIV and other STDs, is the use of condom.
- Adolescents to help them remain uninfected.
- Women who are directly affected and all those who come into regular and frequent contact e.g. family members, friends and employers.

Health Education needs

What is to be communicated? It is very important to identify specific health education needs of women and other target groups so as to impart information which they require and what interests them. Possible needs identified might include:

- Knowledge of what the disease is and how the virus is transmitted, especially in women and children.
- Knowledge of the effects of HIV in women and children.
- How transmission of the virus can be prevented in women and children. Refer exhibit 3.3 for essential information to be provided to each group.

Health Education Strategies

It is not feasible to reach each and every one in the community individually. You may have to utilize different strategies to reach different groups of people.

- Mass Approach:** To raise awareness in the general population, an information, education and communication (IEC) campaign can be used. This includes designing of informational posters and pamphlets and distribution and display in clinics and other public places. In addition, written material/information must also be provided to those who can read. These IEC activities include radio talks and the use of performing arts such as story telling, drama shows, role plays.
- Group Approach:** You may also identify specific target groups who are at high risk e.g. women, men and adolescents, and conduct a series of health education sessions on the topic mentioned earlier, using different methods and media. You must take into account the possible barriers to health education and resources available when planning for health education.

- c) **Individual Approach:** As an MCH/FP service provider you will have many opportunities for person to person communication which is one of the best methods of educating and reaching people in the community and helping overcome psychosocial stresses and developing coping abilities.
- d) **How to Reach People:** The community and different groups can be reached by using existing organizations such as women's groups, youth organizations, community leaders, religious leaders and schools.

4.2 Counseling of Women to Prevent HIV/AIDS

Whereas an information, education and communication programme is useful in prevention and control of HIV/AIDS in women and children, counseling is necessary for making informed decisions, solving problems, overcoming stress and developing coping abilities of an individual and family.

i) Counseling needs of Women

A diagnosis of HIV/AIDS or even the discussion about the possibility of HIV infection creates stressful emotional responses which necessitate adjustments and modifications in the personal life of women and their families. They may have wrong notions, prejudices and fears which require clarification and support. It is, therefore, important and necessary to counsel and consider the needs of women on an individual basis, especially when they are at risk or have acquired the infection.

The long incubation period of 8-10 years or even more, clearly defines the risk of HIV infection to their offsprings. It is important for these mothers to avoid pregnancy or to go for screening to make sure whether she is HIV positive or negative. If she is positive, she may want to postpone her pregnancy or if she is pregnant she may want MTP or continue her pregnancy. These are difficult decisions and the women need support and guidance to make informed decisions about her choice of HIV testing.

ii) Pre-test Counseling

As we have discussed earlier, there may be high-risk women, who may have been exposed to HIV and may need to have HIV testing done.

Pre-test counseling which includes providing information will help her make her own decision for getting tested. The information should be up-to-date and include all the technical aspects of screening, personal, medical, social, psychological and legal implications of being found either HIV positive or negative.

The reactions of the woman you are counseling may be as follows:

- She may be too anxious to absorb what you are telling her. She may have unrealistic expectations about the test.

- She may not realize why questions are being asked about private behavior and, therefore, be reluctant to answer.
- She may not indicate willingness to change behavior even if the test is positive.

Remember, antibodies to HIV develop after six weeks to six months after initial exposure to HIV. This period is termed as “window period”. There may be a negative result during this period. The test needs to be repeated after six months to arrive at a definitive result.

iii) Post-test Counseling

It should take place immediately after the test results are available. You should remember that till the results are out, the woman would be anxious and uncertain about the outcome. Again, privacy and confidentiality should be maintained so that individuals are at ease to discuss the outcome of the test.

If a woman is found to be HIV positive, your first and foremost responsibility is to give her emotional support. The shock of the news will bring a range of emotional and psychological problems, generate many anxieties and issues for which she will need your consistent support and care. Your responsibility will include the following:

- review the course of infection, and explain to her that people with positive tests live for many years.
- help her to seek prompt treatment for all acute infectious diseases in order to increase longevity.
- provide information on routes of HIV transmission.
- explain to her that she can transmit the infection to others as she is infectious for life. Discuss the precautions she should take to prevent HIV transmission to others.
- if the test is positive and the woman is pregnant, explain to her about the risk of prenatal transmission and possible consequences of continuing the pregnancy. Discuss with her the advantages of having an abortion with reference to her belief, attitude related to abortion.
- provide possible health care support, if she wants to continue her pregnancy.
- provide information on health care facilities and resources from where they can seek help.
- take the family and the husband into confidence at the discretion of the woman and provide support to the family for her care and for preventing discrimination and rejection.
- maintain confidentiality of issues related to the family.
- assess the family's reaction, her personal need to have children and her future needs for care.

- educate her and the husband on safer sex practices to avoid future pregnancies.
- counsel the family members of HIV positive pregnant woman on:
 - * precautions to be taken when in contact with blood, semen, vaginal secretions.
 - * frequent hand washing with soap and water, use of bleach which inactivates HIV.
 - * maintenance of good hygiene to protect the patient and the family members.

4.3 Check Your Progress - 4

- i) What are the possible health education needs of women related to HIV/AIDS?
- ii) What are the counseling needs of women?
- iii) What should be the content of post-test counseling:
 - a. when the woman is HIV positive?
 - b. when the woman is HIV negative?

Answers to Check Your Progress

- 1.2 i) * Socio-cultural factors
- 1.2 ii) * Economic factors
- 2.3 i) * Help woman/family to make the right choice between continuation and MTP.
 - * Provide good care to the woman during pregnancy.
 - * Promote contraception to avoid future pregnancy and prevent HIV transmission.
- 2.3 ii) * Vaginal discharge, consistent headache, blurred vision, diarrhoea, fever and cough.
- 2.3 iii) * Use of sterile and intact gloves.
 - * Use of gowns and mask.
 - * Use of eye covering.
- 2.3 iv) The seropositive woman should continue breast-feeding their babies because breast-feeding is essential for the survival and growth of the infant and transmission of HIV through breast milk is uncommon.
- 3.3 i) * After use, needles should not be handled or handle as little as possible to prevent a needle stick injury.

- * When using disposable needles, do not replace the cover before disposing them of.
- * Place the needles, scalp, blade or any other sharp instrument immediately after use in a puncture-resistant container having a disinfectant, located within the work area.
- * Be careful and alert while performing any such procedures.

3.3 ii) a. *Spills of blood and other body fluids:*

Where there is visible spills of blood or other body fluids, the area should be flooded with a disinfectant such as sodium hypochlorite in 1: 10 dilution with water or 1% solution of bleaching powder. The mixed body fluid and disinfectant should then be removed after one hour and the floor/surface should be wiped with the disinfectant.

b. *Soiled linen:*

- * Handle soiled linen after putting on gloves and apron.
- * Put the soiled linen in a leak-proof bag or in a bucket containing 1% solution of bleaching powder.
- * Do not sort out or rinse the linen in the patient care area.
- * Soak the soiled linen for 20 minutes in 1% solution of bleaching powder and then wash it with soap and hot water.
- * Dispose of infected waste, body fluids and disposable equipment by incineration, burying or disposal in a pit latrine.

4.3 i) * Conceptual aspects of HIV infection/AIDS.

- * Modes of transmission of HIV.
- * Effects of HIV in women and children.
- * Prevention of HIV in women and children.

4.3 ii) * Psychosocial Support

- * Behaviour Modification
- * Elimination of wrong notions, prejudices, fears etc.
- * Regulation of fertility and reduction of risk
- * Making informed decision for HIV testing

4.3 iii) Refer Exhibit 3.4

Exhibit 3.1

Assessment of the Pregnant Women

CASE HISTORY

Mrs. T is a 19 year old woman, who is four months pregnant (first pregnancy). She reports at the MCH for the first time. She says that she feels tired, does not appear to be gaining weight and is breathless when she walks. There is a high prevalence of HIV infection in the area.

Ask the participants to address the following questions while making an assessment

- i) What are the possible causes of her condition?
- ii) What questions would they ask her, which might help them find out what is wrong?
- iii) What tests should be carried out to assist in the diagnosis?
- iv) What advice would you give her?

Possible Responses to each question

i) Causes

Anaemia due to:

- Malnutrition
- Worm infestation
- Malaria
- Tuberculosis
- HIV-related illness

ii) Questions

General health history:

- Duration of illness -
- Incidence of other diseases in the family (tuberculosis, HIV infection)
- Recent attack of malaria
- Occupation of husband
- Dietary patterns of family

iii) Tests

- Chest X-ray
- Haemoglobin and full blood count
- Peripheral smear for MP

- Microscopy of stool sample
- Microscopy of sputum sample
- HIV antibody test

iv) Advice

- Rest
- Explanation about HIV infection and AIDS
- Information on good nutrition
- Advice on safer sex and personal hygiene
- Encourage regular attendance at ante-natal clinic to monitor condition
- Enlist family support.

Exhibit 3.2

Task Sheet for working out Safe Working Practices during Childbirth

Task 1

- i) List the type of body fluids which involve extensive contact during childbirth.

- ii) List the protective measures which would be adopted to avoid contact with these body fluids.

Task 2

List the safe working practices you will use while:

- i) handling needles

- ii) handling sharp objects

- iii) exposed to needle stick injury

Task 3

List the safe working practices while

- i) handling the baby

ii) cutting the umbilical cord and cord care

iii) collection of cord blood

iv) resuscitation of the baby

Task 4

List the safe working practices when:

i) there are spills of blood and other body fluids

ii) handling soiled linen

iii) examining and disposing of placenta

iv) vaginal tears and episiotomy

Exhibit 3.3

Activity or Method of Health Education

1. Present the following situations to the groups

Situation

Pushpa, a health educator, has planned to deliver a health talk on AIDS to a group of women in the community. Whereas many women in the group have heard that AIDS is a serious and fatal disease and anybody can suffer from it, some other are curious and would want to know more about HIV/AIDS.

Pushpa took 40 minutes to talk on AIDS and explained

- a) What AIDS is and how HIV is spread.
- b) She named sexual intercourse as the main source of the infection.
- c) She told stories of people who looked healthy and later died of AIDS.
- d) She listed the actions which put people at risk for getting AIDS.
- e) She told them that there are no vaccines or cure for AIDS.
- f) She also told them that in such a situation there is no other choice but the women must insist on their partners to use the condom.
- g) She explained many other facts about AIDS.
- h) At the end of the talk, some women asked questions, many started talking amongst themselves.

2. Give the following five questions to the participants and ask them to write answers.

- Q1. Did Pushpa help the women to make informed choice/decision about HIV/AIDS prevention? Explain.
- Q2. What do you think the women will do to prevent the spread of HIV?
- Q3. Do you think the women understood everything from the lecture as only few questions were asked?
- Q4. Was the health talk the only way of imparting knowledge? What are the advantages and disadvantages of one-way talking?
- Q5. What method would you choose so that you can make the group to ask questions about their concerns and fears about AIDS?

Answers

- A1 Pushpa may have given some of the facts about AIDS, which women needed to make choice, but she did not ask them about the situations and problems each one of them may face or has faced.
- A2 How would one assess what the women will do to prevent the spread of HIV/AIDS as they did not get the chance to share their ideas.
- A3 There is no way to find out how much was understood by the women.
- A4 Since the talk was only one way, we do not know what they have learnt and understood or the questions were not asked because the time was not enough or perhaps one way was not very encouraging for women to ask questions.
- A5 In one-way talking, the person delivering the talk may not understand what questions or concerns there may be in the mind of the listeners. The participants do not get an opportunity to express themselves. In the two-way method, both the listener and the speaker have a chance to ask and discuss questions to work out the problems.

Exhibit 3.4

Health Education for HIV/AIDS Prevention in Women

1. Why should health education be provided to women?

⇒ HIV/AIDS transmission is related to an individual's behaviour

- unprotected sex relations
- mother child transmission
- sharing of contaminated syringes

⇒ Prevention of transmission of HIV infection

- modifications of such behaviours.

2. Who should receive health education?

- Women of reproductive age: Prevent sexual/perinatal transmission
- Men-prevent sexual transmission by using condoms.
- Adolescents - to remain uninfected
- Women who are directly affected and their contacts

3. What is to be communicated?

- Basics of HIV infection/AIDS
- Dynamic of HIV transmission
- Impact of HIV/AIDS on children women
- Prevention of HIV transmission

4. Health Education Strategies

- Mass Approach - IEC campaign to raise awareness
- Group Approach - Target group regular health education
- Individual - Specific educational needs to overcome psychosocial problems

5. How to reach people?

- Existing Organisations
- Women's groups

- Youth groups
- Leaders
- Senior school/college

6. What method would you choose so that you can make the group to ask questions about their concerns and fears of AIDS?

- Discussion
- Problem oriented discussion
- Checklist form of questioning
- Role play

Exhibit 3.5

Post-Test Counseling Guidelines for Women Exposed to HIV Infection

Pregnant/Non-Pregnant Woman And Positive Test

- Ensure privacy and confidentiality.
- Provide emotional support by emphasising sympathetic and helping attitude.
- Explain the meaning of test and possible consequences to herself and the baby of continuing the pregnancy/when gets pregnant.
- Educate the woman about:
 - routes of transmission
 - course of infection
 - signs and symptoms of AIDS
 - AIDS-related illnesses
 - Prompt reporting and treatment of any illness
 - Prevention of HIV infection to others and to the baby by avoiding pregnancy
- Other STDs which help the transmission of HIV infection e.g. syphilis, chancroid, gonorrhoea, herpes genitalis, trichomoniasis
- If pregnant, discuss the option of MTP. Consider the patient's, her husband's and family's beliefs, attitudes and reactions to abortion.
- Ensure and provide health care support the woman will need if the pregnancy is continued.
- Provide information and/or referrals to facilities and resources from where she can seek help.

PREGNANT/NON-PREGNANT WOMAN AND NEGATIVE TEST

- Ensure privacy and confidentiality.
- Explain the meaning of test and possible consequences to herself and the baby of continuing the pregnancy/or when gets pregnant.
- Educate the woman about:
 - Routes of transmission
 - Course of infection
 - Signs and symptoms of AIDS

- AIDS-related illness
- prompt reporting and treatment of any illness
- prevention of HIV infection to others and to the baby by avoiding pregnancy
- Other STDs which help in transmission of HIV infection
- Ensure and provide health care support the woman will need if the pregnancy is continued.
- Provide information and/or referrals to facilities and resources from where she can seek help.
- Educate the women for retesting at an appropriate interval/when pregnancy is desired or occurs.
- Encourage mothers not to engage in further high-risk behaviour, if necessary refer to the appropriate social service organisation.

Chapter 4

NURSING CARE OF THE INFANT AND CHILD WITH HIV INFECTION

OVERVIEW

On completion of this section of the module, participant will be able to identify the infant and the child with HIV infection and plan and implement nursing strategies required for them and their families.

The participant is required to review the reaction of a sick child to hospitalization, general stages of growth and development in children upto 5 years of age.

OBJECTIVES

1. to identify the routes of HIV transmission in infants,
2. to recognize the clinical symptoms of HIV related illness in children as classified by WHO,
3. to find the problem manifestations of children with HIV infection and that of their families, and
4. to plan appropriate nursing care for the affected child and relevant support for the family.

INTRODUCTION

A report from UNAIDS-WHO indicate that by 31st December, 1998 there had already occurred 1.4 million HIV infections among children under the age of 15. It also reported that the infection is increasing among women of child-bearing age. The number of paediatric HIV infections is expected to rise correspondingly, in the coming years.

This mean that several hundred HIV infected infants would be at risk of developing AIDS. HIV related illness in infants and children, is different from that seen in adults. Nurses often care for the entire family presenting varied problems. Therefore, the nurses need to recognize HIV related illness in children, understand its impact on the child and the family, assess their health needs and problems, plan and implement intervention and provide care. This section is designed to help the participant develop competence in primary prevention of HIV transmission in children and in planning and giving appropriate nursing care to the affected infants and children and support to the family.

CONTENT

1. Routes of HIV-transmission in infants and children.
2. HIV-related illnesses in infants and children.

3. Problems of children with HIV infection and those of their families.
4. Planning nursing care.

1. ROUTES OF HIV TRANSMISSION IN INFANTS & CHILDREN

The major routes of transmission in children are:

1. Mother to foetus/infant,
2. Transfusion of infected blood/blood products, and
3. Sexual contact with an HIV infected person.

1.1 Mother to foetus (Perinatal or Vertical transmission) of HIV Infection

Perinatal transmission occurs when a pregnancy involves an HIV-infected woman. An infected mother transmits the infection to 30-50 percent of their offspring. The transmission of infection from mother to child may occur before birth, during birth or after birth.

- i) Before Birth (in utero infection): HIV infection can occur to foetus in uterus after only 15 weeks of gestation.
- ii) During Birth (Intrapartum infection): HIV has also been isolated from cervical secretions and amniotic fluid of HIV positive women. The infection can, therefore, occur during delivery when the baby is exposed to infected maternal birth fluids and there is an added risk of exchange of blood between mother and child.
- iii) After Birth (Postpartum infection): Infants may get the infection after birth through breast-feeding though it is not common.

The factors associated with vertical transmission of HIV to the foetus and newborn depend on multiple factors e.g. HIV disease in the mother, sero-conversion during pregnancy, pregnancy in a year of seroconversion, Presence of STD in the mother and preterm delivery may increase the risk of transmission.

1.2 Parenteral Transmission of HIV infection

The second major route of transmission of HIV infection in children is infected blood or blood products.

Transfusion-associated (TA) AIDS in the paediatric age group was first reported in the year 1983 in an infant. Cases of TA AIDS are classified as those who have history of having received a transfusion of blood or blood components after 1977, without other reported risk factors for AIDS.

Religious and cultural practices which involve the use of circumcision, skin-piercing instruments, ear piercing like tattooing, are not uncommon among children and such rituals add to the risk of acquiring HIV infection.

1.3 Sexual Transmission

Children may be infected following sexual exposure, especially in cultures where adolescents have their first sexual experience with a prostitute or where child prostitution or sexual abuse of children is common.

2. HIV-RELATED ILLNESS IN INFANTS AND CHILDREN

2.1 Clinical Case Definition of Paediatric AIDS by World Health Organization

According to WHO criteria, AIDS is suspected in an infant or child presenting at least two of the major signs and two of the minor signs listed below, in the absence of other known causes of immunosuppression such as cancer, or severe malnutrition.

Major Signs	Minor Signs
<ul style="list-style-type: none">* Weight loss or abnormally slow growth;* Chronic diarrhoea for more than one month;* Prolonged or intermittent fever for more than one month.	<ul style="list-style-type: none">* Generalised lymphnode enlargement;* Oropharyngeal candidiasis;* Recurrent common infections (otitis, pharyngitis);* Persistent cough;* Generalised dermatitis;* Confirmed maternal HIV infection.

Clinical case definition is useful for epidemiological surveillance and for making diagnosis in developing countries.

2.2 Clinical Manifestations

Recurrent bacterial infection e.g. pneumonia, gastroenteritis, bacteremia and meningitis are often the presenting symptoms. They are the major cause of morbidity and mortality in paediatric AIDS.

The opportunistic infection seen in children are same as those found in adults. Tuberculosis is most common.

The malignancies of AIDS are more common in adults. Kaposi's sarcoma and lymphomas are rare in paediatric cases.

As in adults, HIV is neurotropic in children and crosses blood brain barrier to cause a brain infection. Encephalopathy develops resulting in loss of alertness, progressive apathy, lack of interest in environment and deterioration in play. Seizures may occur with febrile illness.

Clinical manifestation of paediatric HIV/AIDS

a) *On Examination:* Physical assessment of the child reveals

- Generalised muscle weakness
- Ataxic gait

Examination of skin may show:

- Patchy or diffuse skin rash
- Herpes lesion
- Perineal or perianal skin ulceration
- Clubbing
- Oral candidal infection
- Overall the child may look weak, cachexic and dehydrated.

b) *On palpation*

- Enlargement of liver and spleen

c) *On Auscultation*

- Diminished breath sounds
- Ronchi
- Wheeze, in cases of PCP

d) Psychometric testing may reveal borderline intelligence, with mild moderate to severe retardation.

2.3 Diagnosis of HIV/AIDS in Infants and Children

It is difficult to determine whether a newborn infant is HIV infected or not. All infants born to HIV infected mothers are seropositive because of maternal antibodies received by them during pregnancy. This antibody can persist in the infant as long as 18 months and disappear after this period only if the child is uninfected. Therefore, detection of antibodies during this period in the infant does not necessarily mean that an infant is infected. Hence, HIV testing is not useful for diagnosis and is not advisable for children upto 18 months of age.

Tests for the direct detection of HIV i.e. through virus culture, polymerase chain reaction (PCR) are now available. These tests can determine the child's HIV status more definitely and as early as at two weeks of age. But, they are both very costly and are not routinely performed for diagnosing purposes.

The seropositive infants showing signs of growth retardation and repeated infections and not responding to treatment should be considered having HIV infection. WHO's clinical case definition

which is developed for epidemiological surveillance and for diagnosis in developing countries, may be used for diagnosing HIV/AIDS in children.

2.4 Check Your Progress - I

1. List and describe the major routes of transmission of infection in infants and children.
2. List the major and minor clinical manifestations as listed by WHO.
3. Why is HIV antibody testing not useful for diagnosis of HIV in infants?
4. How can diagnosis be done in infants and children?

3. PROBLEMS OF CHILDREN WITH HIV INFECTION AND THOSE OF THEIR FAMILIES

The family is faced with several problems after the child is diagnosed having HIV infection. They go through intense emotional trauma which interferes with their psychological bondage of the child, child's care, love and affection resulting in developmental problems. Parents may require considerable time to resolve their grief. Many questions arise in their mind such as:

- Have I transmitted infection to my child?
- Is my spouse responsible for my child's sickness?
- Will my child survive?
- Will my child transmit the disease to other siblings?
- will I survive long enough to take care of my child?
- Will my child be allowed to play with other children?

- Will Our neighbours hate us for having a child with this disease?

In response to these uncertainties, parents make a variety of adjustments, which begin from the time they are told about the diagnosis. The usual emotional reaction which may help in making adjustments are shock, denial, guilt, anger, fear, loss, grief, lowered self-esteem, shame and self sacrifice.

3.1 Emotional Reaction of family to Paediatric AIDS

- i) **Shock:** The initial response of parents to diagnosis of HIV infection in their child is of shock. Shock over the diagnosis may be intensified if accompanied by revelation of bisexuality of the husband.
- ii) **Denial:** Some parents may deny the fact that the child has HIV infection. Initially, it is a normal response to any type of loss because it acts as a defence mechanism, a cushion to prevent disintegration. Parents may undergo varying degrees of adaptive denial as they learn the impact of illness on themselves and their child. It may last from days to a month or even longer. It is indicated by:
 - Physician shopping (frequent change of doctors)
 - Attributing symptoms of actual illness to a minor condition.
 - Refusing to tell or talk about the condition to anyone.
 - Denying the reason for admission to hospitals.
 - Faith in magic cure

Denial becomes maladaptive when it prevents recognition of treatment or rehabilitative goals necessary for the optimum survival of the child.
- iii) **Guilt:** Guilt arises from fallacious assumptions that the illness is a result of personal failing or wrong doings during pregnancy or child birth or having extra marital sex. It may be associated with religious beliefs as punishment or as a test of faith. Similar feelings can be experienced by a child, as illness is the result of the previous misbehaviour.
- iv) **Anger:** Anger arises when diagnosis can no longer be denied. Anger may be self-directed and associated with guilt about the past high risk behaviour. Anger is shown at God and may be manifested by withdrawal from communications. Anger may be targeted at a sick child by refusing to believe how sick the child is. Anger may be projected on health care providers by blaming them for not looking after the child. The siblings may also respond with anger to the imposed restrictions. They may also show anger and resentments towards the ill child and parents due to loss of parental attention.
- v) **Reintegration and Acceptance:** The family experiences a realistic explanation about the disease and the care of the child and, therefore, reintegrates family life with the illness. The family broadens its social relation with the child as an acceptable and participating member of the group and for which it needs professional support.

3.2 Impact of Emotional Reactions

Discovery of HIV infection and the emotional reactions therewith, can hamper psychological attachment of parents with the child.

- i) The parents may become overprotective and permissive and the child may become dependent and demanding. This is usually as a result of the unresolved guilt or fear.
- ii) The parent may neglect the baby. This may be due to a feeling of anger, blame and guilt.
- iii) Parents may be faced with practical difficulties in taking care of the child and other household responsibilities. They may lack time, energy, and financial resources.
- iv) The couple may experience marital conflicts in giving care to the child.

The stressors having an impact on the marriage can be:

- Burden of care assumed by one parent
 - Financial burden.
 - Fear of the child dying.
 - Pressure from relatives.
 - Inconvenience associated with care.
 - Repeated hospitalization.
 - Lacking positive feedback from the ailing child.
 - Inevitable mortality.
- v) Many siblings may show jealousy, hostility, anger, fighting, attention seeking behaviour. They may also show irritability and social withdrawal, fear for their own health.

3.5 Check Your Progress - 2

- i) List the series of family reactions to diagnosis of HIV infection in the child.
- ii) Briefly describe the impact of the child's illness on:
 - a. Parents
 - b. Siblings

4. NURSING CARE FOR INFANT & CHILDREN WITH HIV/AIDS

Nurses remain more in contact with these children and their families and, therefore, are in a position to play a singularly important part in providing assistance to them. The nurses not only carry out skilled technical tasks but also support, coordinate the functions of health and the family.

The major nursing objective in caring for these families is to help them remain healthy and function at the maximum level of child's developmental ability. A participatory approach encourages the family to be more accountable and responsible for the child's care. It reinforces the fact that it is not only the child's condition which matters but family resources are equally important in the progress of the child. The nursing process is accepted as a sound foundation for professional practice for providing individualized comprehensive care.

4.1 WHO recommendations for children with HIV Related Illness

- Maintain good nutritional status.
- Provide early and vigorous therapy for common paediatric infections.
- Immunize according to standard schedules.
- Ensure the child has good quality of life.

Answers to Check Your Progress

2.4 i) The major routes of HIV transmission in infants and children are:

- a. Perinatal or vertical transmission i.e. from an infected mother to her foetus or infant before, during or shortly after birth.
- b. Parenteral Transmission of HIV infection i.e. through infected blood/blood products, use of contaminated needles, syringes, skin piercing instruments and ritual practices like circumcision, infibulation etc.
- c. Sexual Transmission through sexual experience with prostitutes, child prostitution and sexual abuse of children.

2.4 ii) The major signs are already illustrated in table earlier

2.4 iii) HIV antibody testing in infants is not useful because maternal antibodies remain in the infant's blood upto 18 months. Hence, a test would be positive based on maternal antibodies. The detection of HIV antibodies in infants does not necessarily mean that the infant is infected. A repeat test after 18 months of age is more definitive.

2.4 iv) The diagnosis in infants and children can be made on the basis of clinical case definition of paediatric AIDS given by WHO.

3.5 i) The series of family reactions to diagnosis of HIV/AIDS are:

- a. Shock and denial
- b. Guilt, anger, grief, lowered esteem
- c. Reintegration and acceptance

3.5 ii) a. Impact of child's illness on

Parents - may show symptoms of:

- * Emotional trauma
- * Hampered psychological attachment with the child either over-protection or, under-protection.
- * Feeling of anger, blame, guilt
- * Burden on parents' resources i.e. time, energy, money.
- * Fear of child dying.
- * Marital conflicts

b. *Siblings* - may show symptoms of:

- * Irritability and social withdrawal
- * Fear for their own health
- * Jealousy, hostility, anger
- * Attention seeking behaviour

Exhibit 4.1

Care Recommendations for Children with HIV related Illness

The following general recommendations should be implemented in management of HIV positive infants and in teaching their mothers and caregivers during counseling.

***MAINTAIN GOOD NUTRITIONAL STATUS**

In most circumstances, HIV infected mothers should be encouraged to breast-feed their infants. These mothers should also be taught appropriate weaning practices for the introduction of solid foods at 4-6 months, as well as encourage to continue to breast-feed for upto 18-20 months. In addition, regular growth monitoring (preferably every month) is an appropriate way to monitor nutritional status. If growth falters, additional investigations should be made to determine the cause.

***PROVIDE EARLY AND VIGOROUS THERAPY FOR COMMON PAEDIATRIC INFECTIONS**

All infants with HIV antibodies should be treated vigorously for common paediatric infections, such as measles and otitis media. Because the immune system of children with HIV infection is often impaired, these diseases may be more persistent and severe. The children may respond poorly to therapy and develop severe complication. Consequently, the mothers of all HIV antibody positive infants should be encouraged to take their infants for examination and treatment as soon as possible, whenever the symptoms develop.

***IMMUNIZE ACCORDING TO STANDARD SCHEDULES**

All infants and children should be immunized according to standard schedules. It is important that sterilization procedures for immunization equipment be strictly followed. This will prevent transmission of a variety of infectious agents, including HIV.

***ENSURE THE CHILD HAS A GOOD QUALITY OF LIFE**

Most infants of HIV infected mothers are not infected with HIV. In addition, many of those who are infected will have months of asymptomatic life and some live for years without symptoms. Every effort should be made by members of the child's family and by the health care professional to help the child lead as normal a life as possible.

Chapter 5

PALLIATIVE AND TERMINAL CARE OF PEOPLE WITH HIV/AIDS

OVERVIEW

On completion of this section of the module, the participant will be able to understand the needs of the person with end-stage of HIV/AIDS, and plan care for the person who is terminally ill and requires symptom control. The participant should review principles of nursing care of the dying patients and care of the body after death.

OBJECTIVES

1. to demonstrate an understanding of principles of palliative and terminal care,
2. to identify the potential help needed by the dying patients and their families in coping with the loss
3. to demonstrate an understanding of the role of the nurse in helping the dying patient, and
4. to describe the care of the body after death.

INTRODUCTION

HIV/AIDS has assumed epidemic proportions and is rapidly increasing. It is not only affecting the individuals who are suffering from the disease, but also their families, friends, local communities and health care professionals who are witnessing death of these patients.

Nurses are used to dealing with illness and death from the beginning of their career. Death affects individuals in different ways, but HIV disease poses a unique set of problems for patients, attendants, families and health professionals. One of the most difficult decision faced by nursing staff caring for people with chronic disease is when active and often intensive diagnostic and therapeutic interventions are no longer suitable and terminal care becomes appropriate. Palliative care is an active and total approach to care and support for people who have terminal conditions and are nearing death. It seeks to address physical, emotional, social and spiritual needs through the interdisciplinary management of distressing symptoms and has several different elements:

- enhancement of the quality of life
- appropriate treatment of intercurrent health problems
- provision of emotional support for the person and his/her family
- provision of adequate pain relief and control of symptoms
- maintenance of comfort and dignity of the individual

- training of family members to help manage particular problems
- bereavement support to the family after death
- The aim of this module is to assist the nurses to understand all these issues and to develop skills to address them.

CONTENT

1. Palliative and terminal care.
2. Nursing care of the dying patient and his family.
3. Care of the body after death.

1. PALLIATIVE AND TERMINAL CARE

1.1 Definitions

i) Palliative Care:

Refers to care as 'relief without curing. Palliative care is not a medical treatment for HIV but it helps to lessen the pain and other symptoms. The goal of palliative care is to keep the ailing person as comfortable as possible.

ii) Terminal care:

Refers to care of the dying patient, by providing support, comfort and helping the person and the loved ones to prepare for death.

1.2 Principles of Care

You have learnt about the common problems in the end-stage of AIDS (Part-1). These problems are briefly reviewed here.

Problems	Principles of Palliative Care
i) Chronic and Severe Diarrhoea with the possibility of developing dehydration and electrolyte imbalance	<ul style="list-style-type: none"> • Keep the person comfortable • Care for dehydration and electrolyte-imbalance with I.V. fluid and fluid by mouth. • Continue basic nursing care to keep the person clean and dry, and prevent skin breakdown. • Take universal precautions to check cross infection.

Problems	Principles of Palliative Care
ii) Continuous or intermittent fever rising high during acute infection	<ul style="list-style-type: none"> • Keep the patient comfortable with hydrotherapy and provide an appropriate physical environment • Administration of anti-pyretic if it makes the patient comfortable. • Administer fluid
iii) Dysphagia and Anorexia. Dysphasia is frequently caused by oesophageal candidiasis; Anorexia is often associated with nausea and vomiting and caused by the disease condition or treatment (side-effect of medication)	<ul style="list-style-type: none"> • Give small feeds of bland food • Accept the person's decisions (such as not eating, refusing, asking for particular food, refusing tube feeding).
iv) Severe Weight Loss causing malnutrition which is manifested by anorexia, diarrhoea, dyspnoea, exhaustion and neurological problems	<ul style="list-style-type: none"> • May require help for daily activities, such as hygienic care, elimination, change of position, sitting etc. • Provide support, allow the person to talk about how he or she feels • Respect the person's requests as much as possible
v) Dyspnoea occurs due to chest infection and severe anaemia; the patient expresses fear of suffocation, death	<ul style="list-style-type: none"> • Provide O₂ for comfort • Maintain the environment congenial for breathing • If associated with pneumonia, administer medicine Utilize relaxation measures such as deep breathing, back rubs, Fowler's position. • Provide support, allow the person to talk about how he/she feels <ul style="list-style-type: none"> - Respect requests. - Allow family members loved ones to sit with the patient.
vi) Chronic pain	<ul style="list-style-type: none"> • Provide pain medications in a regular dose, and not episodically. For chronic pain, morphine is the drug of choice. • Utilize relaxation measures such as deep breathing, back rub, body massages • Allow the person to talk
vii) Lesions in skin and mucous membrane such as skin rashes and lesions caused by candida, herpes simplex or zoster and kaposi's sarcoma	<ul style="list-style-type: none"> • Application of medicine such as gentian violet for rashes and lesions caused by candida (oral) or other medication for oesophagitis. • The patient may be on chemotherapy or radiation for local lesions of Kaposi's Sarcoma.

	<ul style="list-style-type: none"> • Symptomatic care for nausea, vomiting and other associated symptoms is to be given.
viii) Retinitis giving rise to visual problems and pain, caused by cytomegalovirus or neurological conditions.	<ul style="list-style-type: none"> • Provide comfortable environment with no glare, dim light • Medications as ordered • Analgesics, if needed
ix) Neurological Problems causing: physical and cognitive impairment leading to paralysis, confusion, dementia, and dependence which increases progressively when the patient cannot get up from the bed and is unable to perform basic care	<ul style="list-style-type: none"> • Follow nursing management in restricted body movements • Provide emotional support • Teach family members to understand the condition and provide care • Accept delay in understanding anger, grief and other emotions • Perform basic care, if needed • Maintain nutritional needs • Encourage family members to remain near the patient and assist in meeting her/his basic needs
(x) Summary: Palliative and Terminal Care may begin	<ul style="list-style-type: none"> • when medical treatment is no longer effective • when the person says he/she is ready to die • when the body's vital organs begin to fail
The principles of care may be summarized in terms of nursing goals of palliative and terminal care	
<i>Allow as much autonomy as possible, i.e. provide the patient with as much control over symptoms as possible.</i>	
<ul style="list-style-type: none"> • Accept the person's decisions viz. such as not eating, refusing or asking for visitors, sitting up or staying in the bed etc., and • Respect the person's needs for independence by allowing him/her to do what he/she can do for himself/herself or in refusing care such as repositioning in bed. 	
<i>Assist the person in grieving for and coping with loss and change.</i>	
<ul style="list-style-type: none"> • Provide Support by allowing the person and family to talk about how they are feeling. These patients require special counseling sessions. Refer Exhibit 4.2 for counseling terminally ill patients, • Promote a sense of self esteem. It is usually enhanced by looking at personal achievements and reflecting on positive events of the past, and <p>Accept and adapt to patient's feelings of anger, grief and other emotions and reactions.</p>	
<i>Help the person and loved ones to prepare for death.</i>	
<ul style="list-style-type: none"> • If the patient or his/her personal attendant asks, or having assessed what he/she want to know, describe what will happen as he or she nears death. Give reassurance about pain and symptom control, where possible, and 	

<ul style="list-style-type: none"> • Assist the person and family in planning details about who needs to be notified after death and the organization of funeral arrangements, their will etc.
<i>Cope with your own emotions.</i>
<ul style="list-style-type: none"> • The nurse must be able to cope with the patient's process of deterioration and dying. This involves being emotionally prepared to accept the inevitable outcome. Having others to turn to and an ability to grieve are helpful in dealing with one's own feelings. It is important for the nurse to change the focus from resolving the underlying pathology and making the person better, making the process of dying as easy and comfortable as possible for all concerned.
<i>Teach the family and voluntary workers in caring for terminally ill patients.</i>
<ul style="list-style-type: none"> • Dying at home is often desired by the patient. Therefore, one of the nursing goals should be to teach the family and voluntary workers * on what to expect of the dying process, * on developing confidence, and * on providing comfort measures.

1.3 Resources and Support Group Care

AIDS is often perceived as being caused by sex outside marriage. Hence, it is widely regarded as a cause for moral judgment, censure and condemnation. Therefore, many people with HIV/AIDS, fear rejection by the family, neighbours, friends and colleagues at work place, try to conceal their diagnosis from them. Once it is known that a member of the family is suffering from HIV/AIDS, the patient and the family members run the risk of being rejected/outclassed by the community.

Since hope and acceptance can help the patient to live positively with HIV/AIDS, the families and communities are very important for them.

i) Family Resources:

Some patients with terminal stage of the disease do not wish to die in hospitals and want to go home. They should be allowed to decide for themselves about staying in hospital or at home.

ii) Families are very important for people with AIDS

The home can be a shelter where someone can rest assured that he/she is loved and accepted, and a place where he/she does not have to be brave or hide feelings. The families can help patients with AIDS in many ways, such as in:

- helping them to reduce their fear by making them feel loved,
- supporting them financially as much as possibly you can,
- providing an environment where the patients can talk and discuss freely.

- helping them to eat nutritious food,
- making sure that the person gets prompt treatment for infections,
- nursing them when they need palliative care,
- making plans for children and spouse and enjoying the remaining days together, and
- helping them to live positively and make plans for the future so that they can accept death in a dignified way.

iii) Community Resources:

Community resources include friends, neighbours, voluntary organizations, religious groups, student/youth groups, working colleagues, industrial organizations, etc. It is increasingly recognized that the community organizations have a front line role to play in the global struggle against HIV/AIDS.

Community assistance to people with AIDS takes several forms. Some areas are discussed below:

a. Spiritual Support:

Many people with a terminal illness such as AIDS, find spiritual support a great source of comfort and strength to cope with feelings of guilt and fear and emotional stress. As death approaches, spiritual support becomes even more important, not just for the dying person but for other family members as well. If the deceased has no family living nearby, the community usually organises the funeral.

Religious groups, voluntary organizations, social groups, community groups have a role to play in providing spiritual support through activities such as praying together, singing hymns (bhajans) and other religious songs, reading from scriptures or writings etc. Spiritual care helps people with AIDS to face the sickness and prepares them for death.

b. Emotional Support:

For a person with AIDS the feeling of rejection by the society is a devastating experience. Often it occurs because family members, friends, neighbours and colleagues do not know how to cope with a dying person. Therefore, they withdraw from or abandon the person who most needs their love and friendship. Hence, community support is often needed for extending friendship to the person dying of AIDS.

Explain to the patient that if a friend or relative appears to reject him/her, he/she should try not to feel hurt. It may be that the friend is not actually rejecting but feels awkward to face the patient or that the over-anxious patient is imagining and worrying for nothing. They may find new and caring friends at AIDS support groups.

c. Care and Support:

The patients at the terminal stage usually require caring for their basic needs as they physically become dependent on others. They are often discharged from hospitals (if admitted) at the end stage and remain at home till death. The family members need assistance to learn to give palliative care at home. Hence, volunteers of the AIDS Support group need to visit homes and help them to provide basic care, sometimes by teaching nursing care, providing food, caring for children, doing household work, getting medications, and providing spiritual and emotional support. Such support services can only be provided by community based organizations. In some communities other HIV patients, who are in early stages of the disease, provide care to people who are sick and dying. This helps them to make new friends, reduce their fear of death and develop a positive outlook in life.

d. Care of Orphans:

Countries which have faced explosive epidemics of HIV infection are witnessing that thousands of children under 15 years, have become orphans. A majority of such orphans are accepted and cared for by close relatives of the deceased. But with the increase in adult HIV/AIDS cases, more and more children are being infected with HIV and coming down with AIDS. The number of HIV/AIDS orphans is also increasing correspondingly. Placement of these orphans is going to be an enormous problem in the coming years. These orphans would not only require material support but also psychological support. The individuals dying of AIDS seek to be assured that their children would find a safe home to live in after they die. This also put enormous stress on the members of the family and community.

e. Economic Support:

Chronic illness status, loss of jobs, expenses on treatment clubbed with fear of employing AIDS patients in the minds of employer etc. often lead to a financial crisis in the family of a patient with AIDS. Other income generating vocation becomes necessary for the family of young one who is suffering from AIDS. AIDS support group can effectively provide such assistance.

1.4 Check Your Progress

- i) Define palliative care and terminal care.
- ii) List the care you would plan for chronic pain and severe weight loss in a terminally ill AIDS patient.

2. NURSING CARE OF THE DYING PATIENT AND HIS FAMILY

It includes:

- 2.1 Emotional support to the dying patient
- 2.2 Physical needs of the dying patient
- 2.3 Support to grieving family

2.1 Emotional Support to the Dying

Most patients with HIV disease seem to have a realisation that they are going to die even before signs of death become apparent. This realization produces a profound change in the mental outlook of the individual as well as in his physiological functions.

i) Maintain Security, Dignity and Confidence:

The dying patient needs security, self-confidence and dignity. He should not be isolated or abandoned.

ii) Provide Relief from Loneliness, Fear and Depression:

The dying patient needs relief from his loneliness, fear and depression. He/she needs someone to spend time with him and listen.

iii) Allow observance of Religious rights for Comfort:

The dying patient often seeks the presence of the priest or someone to read from the scriptures. There are certain observances in most religions that bring comfort to persons of each faith at this time.

iv) Provide Diversional Activities:

For the dying patient, everyday needs are heightened. The patient should be provided with the basic necessities without strain on his part.

v) Help in the Acceptance of Reality:

The patient, even in the last stages of dying, tolerates the idea of death more readily if he still has some degree of hope.

2.2 Physical Needs of the Dying Patient

The patient's state of mind tends to influence his/her physical reaction to death and also the kind

and amount of care the nurse should give. Some physical needs associated with the patient dying of AIDS include:

i) Body Position:

Sensation and power of motion as well as reflex activity are lost first in the legs and then gradually in the arms. Pressure on the extremities seems to bother the patient. Sheets should not be snug, the patient should be turned frequently, and special attention should be given to the positioning of the legs. Since the dying patient has little muscular control, the body must be well supported by pillows.

ii) Mouth hygiene:

The mouth should have special care. The excessive dryness caused by mouth breathing can be relieved by coating the mucous membrane with a thin layer of oil/boroglycerine using an applicator.

iii) Clothing:

Patients need lighter clothing, lightweight blankets, and fresh, circulating air. The dying patient often suffers from dehydration. Water or some refreshing liquid, should be given in small quantities.

iv) Environment:

The dying patient always turns his head towards the light. As sight and hearing fail, he/she sees only what is near and hears only what is distinctly spoken to him/her. Indirect lighting should be provided in the room, and a loved one should be seated near the patient at the head of his/her bed.

v) Pain Relief:

The dying patient seems to be in pain throughout the dying process. If, however, all of his/her other needs are met and if he/she is at the stage of acceptance where he/she has said all he/she feels he/she needs to say, he/she may need minimal pain medication. However, if necessary, morphine may be administered to relieve pain and discomfort.

The dying patient is usually conscious to the very end. The nurse, to the very end, needs to give total care based on careful, ongoing assessment. She stays with the patient as long as the individual shows signs of life except when the patient wishes to be left with a friend, a member of the family, physician or a minister (priest).

2.3 Support to the Grieving Families

In order to assist those close to the dying patient, the nurse needs to make sure that they have been given adequate information on prognosis and that they are prepared for death. Sometimes patient has no visitors, he/she has probably been rejected by family members or there too many friends, relatives crowding over the patient. They will need to be explained to limit the number of visitors, especially if the patient desires so.

Family members often feel much more relieved if they are allowed to assist in the care of the patient. This participation may help them in their grief. Later, they will be able to reflect not only on the support their presence brought to their loved one but also on the comfort their ministrations of care gave him/her.

The following are some guidelines for situations that the nurse commonly finds herself in with grieving family members:

- i) **The request** to see the dead patient should not be denied to the family members or others close to the deceased person.
- ii) **Since the nurse** knows that the first stage of grief is shock and disbelief, even when death has been expected for sometime, she should anticipate that visitors and family members may react in highly disturbing ways when informed of the death. She should understand that their denial, anger or other uncontrollable behaviour is natural and expected.
- iii) **The nurse should** recognize that she will witness many different kinds of grieving customs in her nursing career. The various cultural and religious rituals are often essential to enable the family to tolerate the initial period of distress.

When the patient ceases breathing the nurse reports this fact immediately to the physician. After the physician has certified his/her death, the nurse prepares the body before handing it over to the relatives. Refer exhibit 4.3 for the summary of care needs of a dying patient.

2.4 Check Your Progress

- i) As peripheral circulation fails in a dying patient, the body temperature rises.
 - a. How do the patients present this manifestation?
 - b. What nursing measures would you suggest?

ii) a. Why does a dying patient turn his head towards light?

b. What should be the nursing measures?

3. CARE OF THE BODY AFTER DEATH

In hospitals where a physician is present or can be called immediately to pronounce death, the nurse takes no steps towards caring for the body until this has been done. In cases of death at home hours may elapse before the physician's visit, and certain precautions must be taken to prevent distortions of the face or body. The patient is not legally dead until the doctor has certified his death, and nothing should be done that would interfere with life, as there is always a possibility of life remaining in the body. The undertaker, for example, cannot accept the body or prepare it for burial before this official pronouncement has been made.

Custom varies in relation to the nursing care of the body after death, but certain principles should be kept in mind.

3.1 Maintain Desired Position

In order to keep the normal position of the features and form, the eyes are closed immediately as in sleep, and the body is straightened with the arms laid by the sides, the mouth is closed and any dentures that have been removed for the patient's comfort are replaced, the head is elevated on one pillow, and a folded towel is used to prop the chin in position for a short time until the process of death stiffens the features. Bandages may be used to hold the jaw firm.

3.2 Care of Articles Removed from the Body

Before proceeding with any necessary bathing of the body, all rings (including wedding rings), earrings, bracelets, beads or other articles worn should be removed and placed in a separate package with other articles of value. A list of such items should invariably be prepared. These would require disinfection before they are handed over to relatives along with the list.

All clothing and other personal property of the patient should be disinfected before giving to the family as per the regulations of the institution.

3.3 Protect the Body from Body Discharge

Soiled dressings should be replaced with fresh dressings. In home or hospitals, a pad of cotton lined on one side with a waterproof covering, and a diaper of old muslin may be applied to prevent

the escape of urine and faeces from the relaxed meatus and anus. Clean and dress the body according to the family's desire/hospital requirements.

In homes, the body is left dressed in a person's clothing. A large bed sheet and a plastic bag or sheet should be provided for wrapping the body if it is to be removed from the dwelling for preparation for the funeral. Please remember HIV remains in the dead body upto 21 days.

3.4 Place Identification Label

A tag containing the patient's name, the clinical division, and the date of death is attached to one wrist. The body is wrapped in a bedsheet and plastic bag or sheet. A tag is attached to the outside bearing the same information as in the tag attached to the wrist.

3.5 Check Your Progress

- i) What precautions would you take with the following when you care for the body after death?
 - a. Earrings removed from the body,
 - b. Soiled dressings,
 - c. Bed linen

Answers to Check Your Progress

- 1.4 i) Palliative Care refers to care as 'relief' without curing and goal is to keep the person as comfortable as possible.

Terminal Care refers to care of the dying patient by providing comfort and prepare him/her for death.

- 1.4 ii) *Care in Chronic Pain*

- Provide pain-relieving medications in regular doses. Maintain the dosage.
- Morphine may be prescribed in a persistent pain condition.
- Utilize relaxation measures, like back rub, body massages.

- Allow the person to talk.

Care in Severe Weight Loss

- Provide help for daily activities, hygienic care, elimination, position, grooming etc.
- Provide support and allow the patient to talk about how he/she feels.
- Respect the person's requests as much as possible.
- Attempt to give nutritious food.

- 2.4 i) a. As peripheral circulation fails, there is a 'drenching' sweat and the body surface cools, regardless of the room temperature. To compensate, body temperature begins to rise and restlessness is often caused by a sensation of heat.
- 2.4 i) b. The patient needs lighter clothing, light-weight blankets, and fresh, circulating air. The patient may suffer from dehydration. Water or some refreshing liquid should be given in small amounts.
- 2.4 ii) a. The dying patient turns his/her head towards the light because he/she sees only what is near and hear only what is distinctly spoken as the sight and hearing gradually fail.
- 2.4 ii) b. Provide indirect light to avoid glare. A loved one should sit at the head end so that the patient can easily see him/her. Do not make the room dark, never talk in whispers and never fail to answer the patient's questions honestly.
- 3.5 i) a. Earrings removed from the body should be placed separately in a packet. These should be disinfected before handing over to the relatives according to the regulation of the institution.
- 3.5 i) b. Soiled dressings should be replaced with fresh dressings. A pad of cotton, lined with a waterproof covering and a diaper of old muslin may be applied to prevent the escape of urine and faeces from the relaxed meatus and anus.
- 3.5 i) c. Before handing over to the family bed linen should be disinfected according to the regulation of the institution.

Exhibit 5.1
REACTION TO LOSS

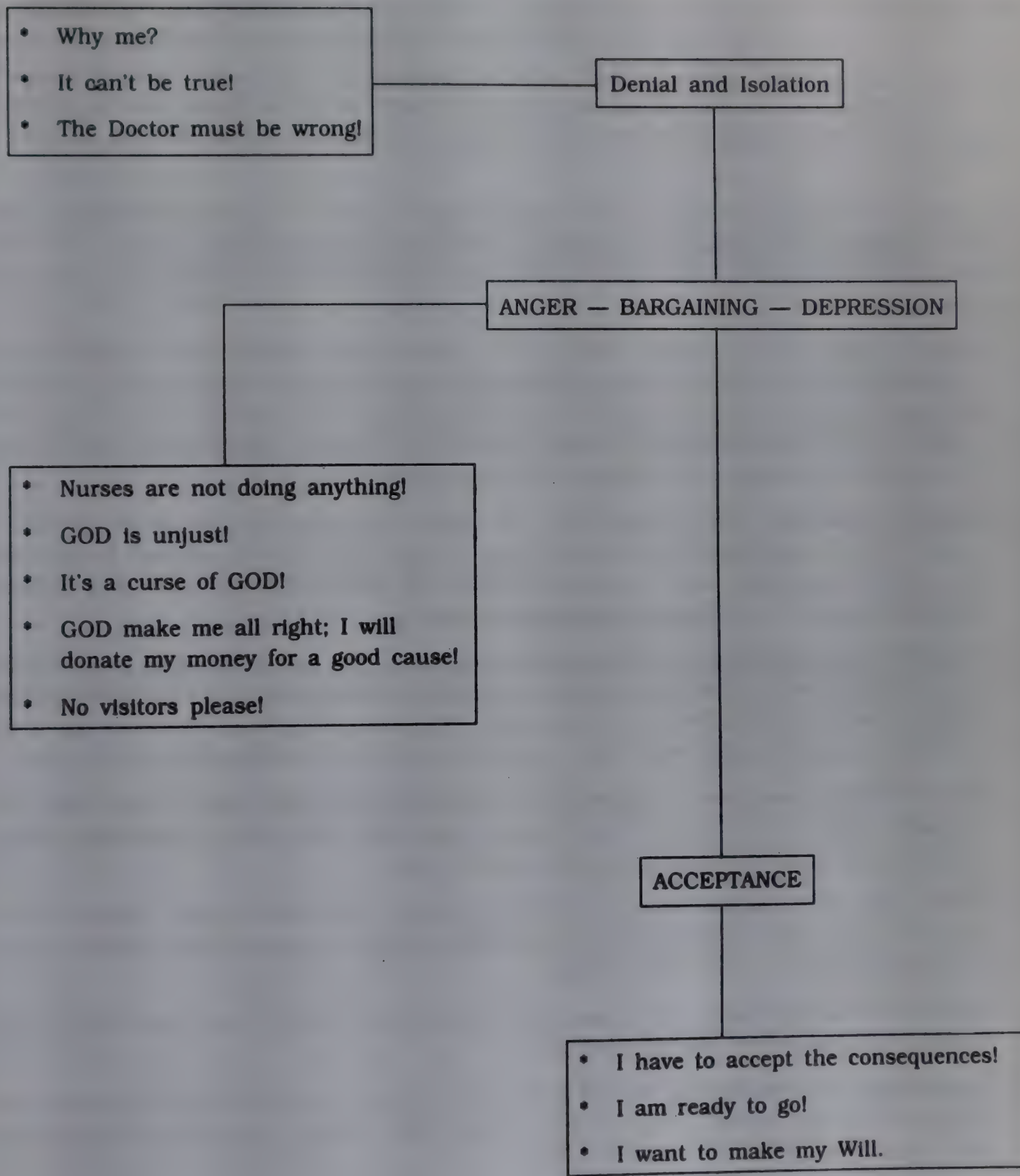


Exhibit 5.2

COUNSELING IN TERMINAL CARE SITUATIONS

HIV/AIDS counseling involves helping the patient with AIDS i) to lead an active, productive and hopeful life to the extent possible and ii) to cope with the probability of a shortened life. During periods of relative health, issues involving activities, personal goals are important. The counselor helps the patient to maintain hope and engage in constructive activities. During sickness, counselor's role is primarily supportive and help the individual in coping with the prospect of death.

The counselor should be familiar with the common stages of death and dying (Kubler Ross, 1969). Common psychological reactions to the threat of death are disbelief or denial, anger, depression, bargaining and acceptance. Some of the useful counseling techniques identified in the course of studies are as follows:

1. **Keep it simple.** The counselor often feel very anxious about dealing with the terminally ill patients with AIDS. This may lead to overtalkativeness, use of a confusing language, bitterness, stiff body posture, or failure to give the patient an adequate opportunity to talk or ask questions. The counselor must be aware of his/her own anxiety and handle it by discussing with another colleague and adopting relaxation techniques.
2. **Wait for questions.** The counselor can use silence effectively and provide the patient an opportunity to express his/her feelings of anger or fears. The counselor can wait for questions to arise. All questions need not be answered. The patient may be expressing emotions through questions i.e. Why it is happening to me?
3. **Find out what the diagnosis means to the patient.** The counselor needs to understand how the diagnosis is affecting the patient, through questions and latter's interpretation and personal meanings attached to the diagnosis. The counselor corrects misconceptions and answers questions supportively, thus conveying that he is knowledgeable and can help.
4. **Don't feel that you have to answer every question that could arise, at one time.** The counselor must give the patient time to absorb, think and reflect over the information which should be given in bits and pieces over several visits.
5. **Don't argue** if the patient wants or needs to deny the information offered, respect his/her right to do so. Communication opens up fruitfully if patient trusts and has confidence in the counselor. As such avoid confrontation.
6. **Check for understanding.** After you have provided some information, check whether the patient has understood the information.
7. **Leave room for hope but do not tell a lie.** The counselor should let hope live without being untruthful to the patient. The counselor should make himself comfortable with questions like, 'Is this AIDS?', 'Am I going to die'?

8. **Support to facilitate discussion on plans for the family.** The counselor should help the patient to organise legal and income matters for ensuring security for the spouse/family. In case of bread earners from poverty groups, the counselor may have to assure the patient of mobilising support for his spouse/family in terms of short-term relief and long-term alternatives for employment etc.. Such planning will reduce his anxiety about his impending death as well as encourage cognitive coping through reality orientation.
9. **Encourage use of rituals and cultural practices** to help face the illness and death. With the help of the family priest or elders administering traditional rites and sacraments of faith, the counselor can provide support and counseling and help the patient to resolve unresolved spiritual issues.

Summary of Techniques used in Counseling Terminally Ill Patients
<ul style="list-style-type: none">• Keep it simple.• Wait for questions.• Find out what the diagnosis means to the patient.• Don't feel that you have to answer at one time every question that could arise.• Don't argue with denial.• Check for understanding.• Leave room for hope but do not tell a lie.• Support to facilitate discussion and plans for the family.• Encourage use of rituals and cultural practices to help face the illness and death.

Exhibit 5.3**CARE NEEDS OF DYING PATIENTS**

Needs of terminally III Patients	Aspects of Nursing Care
i) Reaction to dying is highly individual and depends on cultural background. This may range from denial, anger, depression and acceptance.	<ul style="list-style-type: none">* The nurse needs to understand that the patient's reaction varies from person to person. She needs to provide an orderly explanation of the patient's questions.
ii) When death is inevitable, the patient and family attempt to prolong and restore life.	<ul style="list-style-type: none">* Allow the patient to speak openly about his feelings.* Make sure that someone is always with the patient at the end-stage so that the dying patient does not feel isolated.
iii) The patient may develop control over certain aspects of dying but he/she may suffer at the end stage with several problems such as pain, diarrhoea, dysphasia, dyspnoea, neurological problems making him physically dependent. Everyday needs are heightened.	<ul style="list-style-type: none">* Allow open awareness to the probability of death which allows for more participation in the acceptance of death, both by the patient and the people around him. Encourage him to tie up the 'loose ends of his life'.* Maintain privacy and dignity of a dying patient. Give palliative care for as much comfort as possible.
iv) The patient's family members may reject him/her or become very emotional knowing that she/he is dying.	<ul style="list-style-type: none">* Counsel family members not to abandon the patient and remain near him/her. They may provide spiritual and emotional support which is a great source of comfort and strength.
v) The patient needs relief from loneliness to feel secure and maintain dignity	<ul style="list-style-type: none">* Help family in their support of the patient. Make sure someone remains at his bedside. Meet the religious needs.

Chapter 6

EDUCATION OF TRADITIONAL PRACTITIONERS TO PREVENT HIV TRANSMISSION THROUGH SKIN PIERCING PRACTICES

OVERVIEW

On completion of this section, the participants will be able to develop strategies for educating traditional practitioners to prevent HIV transmission through skin piercing procedures.

OBJECTIVES

1. to identify practices in a specific community which involves piercing of the skin by instruments that are re-used,
2. to identify alternative non-invasive procedures which may accomplish the same objective as the above practices,
3. to identify the cultural and religious values and taboos which may prohibit sterilization of instruments or use of alternative practices, and
4. to develop health education strategies for teaching the practitioners and the community appropriate procedures to minimize the risk of HIV transmission.

INTRODUCTION

Invasive procedures carried out within the formal health care system are recognized as possible route for HIV transmission. Likewise skin piercing practices performed by traditional practitioners with instruments not properly sterilized, hold the risk of HIV transmission. This section reinforces the role of the nurse in providing community education to prevent HIV transmission.

CONTENT

1. Traditional Customs and Skin-piercing practices.
2. Health Education Strategy.

1. TRADITIONAL CUSTOMS AND SKIN-PIERCING PRACTICES

1.1 Traditional Customs and Practices

Some traditional customs are now risky because of the prevalence of HIV infection. Risky customs include polygamy, wife sharing and wife inheritance, circumcision, scarification and infibulation.

These are classified as customs and practices involving non-regular sexual rituals and practices and skin-piercing rituals and practices.

i) Customs Involving non-regular sexual rituals and Practices

Wife inheritance is quite common in some of Indian cultures. Usually, after the death of a brother his wife becomes the second wife of one of the other brothers in the family. This increases the risk of HIV infection in the family, especially if any one of these partners has infection or acquires infection later. Similarly, wife sharing is a risky practice. It is always best to stick to one faithful sexual partner.

ii) Skin-Piercing Rituals and Practices and HIV infection

Any custom which involves sharing of skin-piercing instruments is also risky. Skin-piercing rituals like circumcision and scarification can be responsible for HIV transmission when the knife or the blade is used on more than one person without proper cleaning or sterilization in between use. In this situation a small amount of blood, which may be invisible, could remain on the instrument and be transferred to the next person.

Other skin-piercing procedures which may be responsible for HIV transmission are piercing of ear and nose, tattooing, shaving of scalp and beard and tooth extraction.

1.2 The Role and Status of Traditional Practitioners

The traditional practitioners are an integral part of Indian Culture. Most people have tremendous faith in traditional practitioners and seek their help for many health problems on different occasions.

Some practices of traditional practitioners may contribute to the spread of HIV through contaminated blood. The use of unsterilized cutting instruments such as razor blades or knives to carry out rituals like shaving of scalp, scarification or circumcision and to make cuts in the skin for insertion of medicinal herbs may account for transmission of HIV infection from person to person.

Traditional practitioners are otherwise a potentially powerful and trusted force in the community because not only they provide specific service but also invaluable psychological and emotional support as and when required by the people. Therefore, they can be used as effective change agents who can help to promote safer sexual behaviour, perform safe piercing procedures and thus reduce the spread of HIV.

It is, therefore, essential to understand the risky nature of traditional customs and skin-piercing practices followed by traditional practitioners; and examine these practices within several cultural traditions. You need to approach these personnel, establish effective interpersonal relationship and educate them about safe techniques to be followed and other aspects of HIV/AIDS prevention and control.

2. HEALTH EDUCATION STRATEGY

2.1 Importance of Health Education

HIV has no territorial boundaries. It is going to be found in villages, towns and cities in the coming years. By and large it may not be feasible to know who is infected and who is not. It is, therefore, safer to modify dangerous practices and make them safe and help prevent the spread of HIV.

A traditional practitioner who performs a skin-piercing service may harm people without knowing it. The service itself (e.g. traditional method of treatment, tattooing, infibulation and circumcision) is often believed to be of great value to the people and is an important part of our cultural tradition. Traditions are valuable part of our lives. But times have changed and we have to make allowance for the safety of the self as well as people around us.

As discussed earlier, the traditional practitioner can influence change in the behaviour of the people. They can help in prevention of HIV infection. It is, therefore, important to attain their support in the prevention and control of HIV/AIDS. The support can be obtained through organizing systematic information, education and communication programmes (IEC).

The nurses can play an important role in informing their patients about the dangers involved in these practices and encourage changes in these rituals and practices. It would benefit the society. But before suggesting safer techniques or alternative practices, nurses need to understand why these practices are performed and what is the meaning of these practices to the people.

2.2 Developing Health Education Strategy

Health education strategy refers to organizing an IEC programme which will depend upon several factors like traditional practitioners' knowledge and attitude towards HIV/AIDS and their practices. Whether these practices can be done safely, whether there are alternatives and whether people are likely to give up the practices. A nurse has to consider all these aspects and inform the patients about the benefits modified practice would provide to him and other member of the family.

It is better to carry out a small study to find out what they already know and believe about AIDS.

It is better to approach them through an organized body e.g. gram panchayats or traditional practitioners association, if any, which has influence over them and through them a regular contact and information giving mechanism can be established. Through these contact sessions using different teaching methods, various topics can be discussed and clarified, such as:

- Information on prevalence of HIV/AIDS
- Modes of transmission
- How some of the customs and rituals may be responsible for the spread of the infection, and how they can be modified or changed that may help in prevention and control of HIV/AIDS.

During these sessions free and frank discussions should be encouraged. A team approach is needed for these sessions to be successful. The team can consist of Doctors, Nurses, Extension Educators, Social Workers and Counselors (if any) and traditional practitioners alongwith some other influential and important people from the community. This will ensure a sense of mutual respect, importance and concern for each other and their cultural values, rituals etc. Problems related to various practices and their harmful effects can be discussed and identified, alternative practices or modified practices can be sorted out with mutual consensus.

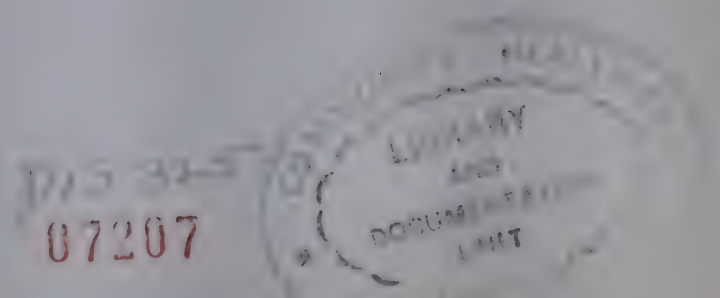
Some times, such information and educational approaches may not bring in desired results in terms of change in practices and modification in behaviour by some of the practitioners and community members. In such cases executives at the higher level, both Government and concerned association, should be informed for further action and direction.

2.3 Check Your Progress - I

- a) List some of the traditional customs which are common in various cultures to which an individual is at risk of HIV.
- b) How do these skin-piercing customs and practices spread HIV/AIDS infection?
- c) What are some of the other customs and practices which can spread HIV/AIDS?
- d) Why do you think that traditional practitioners be involved in prevention and control of HIV/AIDS infection?
- e) How would you involve them in prevention and control of HIV/AIDS infection?

Answers to Check your Progress

- a) Circumcision, scarification, piercing of nose and ears, tattooing, some kind of treatment involving skin-piercing, shaving of scalp, shaving of beard.
- b) When there is repeated use of skin-piercing instruments without being properly cleaned and sterilized in between use and when the instrument is such that it cannot be properly cleaned or sterilized and is contaminated with infected blood.
- c) The other customs are polygamy, wife inheritance, wife sharing, having sex before marriage to determine manliness and womanliness.
- d) Traditional practitioners are socially accepted and potentially powerful because of the type of specific services and personal care given to the people when they need it. But the services they perform may harm the people without their knowledge. Therefore, they need to be involved in improving their practices and also becoming change agents because they are influential and can help change some of the practices and behaviour which are otherwise responsible for the spread of HIV/AIDS infection.
- e) Through a well-planned health education strategy involving the team approach.



Chapter 7

GENERAL SAFETY PRACTICES AND UNIVERSAL PRECAUTIONS FOR THE PREVENTION OF HIV TRANSMISSION IN HEALTH CARE SETTING

OVERVIEW

On completion of this section, the participants will learn about general safety practices and precautions and their application while at work, for the prevention of infection with HIV and other communicable agents.

INTRODUCTION

Universal safety guidelines are based on the assumption that all blood/blood products and body fluids are potentially infectious, regardless of whether they are from a patient or health care worker.

Blood and body fluids may contain HIV or other infectious agents. Sputum, vomitus, saliva, urine and faeces may contain some pathogens and can, therefore, be infectious. Risk of cross infection is considerably reduced if simple infection control practices are applied.

CONTENT

Universal Safety Practices

1. Hand washing
2. Use of protective barriers,
3. Prevention of accidents through safe handling and disposal of sharps,
4. Proper use of disinfection and sterilization techniques.

1. UNIVERSAL SAFETY PRACTICES

All levels of health care providers who come into contact with the patients directly or indirectly always have some risk of exposure to infectious agents. Usually this risk is very few and readily overcome by standard precautions which are really simple i.e. hand washing, use of protective barriers, safe handling and disposal of sharps, disinfection and management of contaminated material and environment.

1.1 Hand Washing

Hand washing with the soap is the most simple, and cost-effective measure for infections control. because transmission of infection by hands is the most important route.

The hands of health care workers are frequently responsible for the transmission of various infections between patients. Microorganisms acquired on the hands by contact with body fluids or contaminated surfaces can be readily removed by washing with soap and water.

Most microorganisms cannot pass through intact skin. However, hands should be washed immediately if they become contaminated. After washing hands with soap and water, rub hands with alcohol. If there is burning, it indicates a cut. Cuts, abrasions or otherwise damaged skin should be covered with a water proof material while working. Hands should be washed immediately after gloves are removed.

Under ideal circumstances, hands should be washed at a basin with running water for atleast 10 seconds. However, hand washing, using a bowl of water and soap is still effective.

If a re-usable towel is used to dry the hands, then clean towel should be used as and when required.

Areas commonly missed in hand washing and steps of effective hand washing are illustrated below.

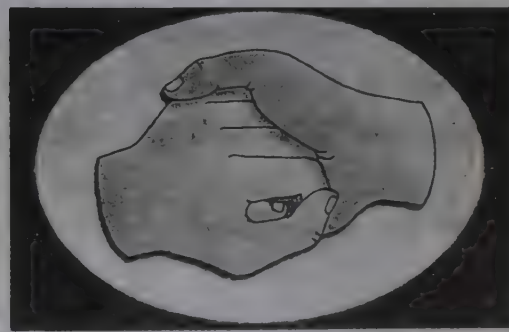
Steps For Effective Hand Washing



Step 1
Wash palms and fingers



Step 2
Wash back of hands



Step 3
Wash fingers and knuckles



Step 4
Wash thumbs



Step 5
Wash finger tips



Step 6
Wash wrists

2. USE OF PROTECTIVE BARRIERS

Appropriate Barriers should be worn where exposure to blood and other potentially infectious fluids is anticipated. The protection selected will depend on the type of exposure.

Where supplies of protective barriers are limited, priority should be given to procedures involving a high risk of exposure to blood.

Table 7.1 Selection of Protective Barriers

Type of exposure	Examples	Protective barriers
Low Risk - contact with skin with no visible blood	* injections, * minor wound dressing	* Gloves
Medium Risk - probable contact with blood, - splashing unlikely	* vaginal examination, * insertion or removal of intravenous canula, * handling of laboratory specimens, * large open wounds dressing, * venepuncture, spills of blood	* Gloves, * Gowns * Aprons may be necessary
High Risk - probable contact with blood, - splashing, - uncontrolled bleeding	* major surgical procedures, particularly in orthopaedic surgery and oral surgery; * vaginal delivery	* Gloves * Water proof gown or apron * Eye wear * Mask

i) Gloves

Latex or Vinyl gloves should be worn for direct contact with blood or other potentially infected body fluids. Gloves should be worn when sharps are used. Although gloves will not prevent a sharp injury, wearing gloves has been shown to reduce the volume of the infectious material and may significantly reduce the risk of exposure. For invasive procedures, gloves must be sterile, but for most other procedures non-sterile gloves can be used.

Gloves should be discarded after attending each patient. If this is not possible, certain kinds of gloves can be washed and sterilized before re-use.

Gloves with visible holes or tears must be discarded.

The use of double gloves is not recommended, because the practice is not more protective than use of single pair of glove. Moreover, it may even lead to more accidents due to clumsiness.

Heavy duty rubber gloves should be worn for cleaning instruments, handling soiled linen or dealing with spills of blood and body fluids. They can be washed and re-used many times.

ii) Gowns and Aprons

Aprons should be worn to protect health care workers during procedures where splashing of blood or body fluids is anticipated, e.g. delivery. During surgery, where there is a greater likelihood of splashes with blood, one should wear a water proof gown or a sterile cloth gown with a plastic apron underneath.

iii) Masks and Protective Eye Wear

Although splashes to mucous membranes are relatively common, they do not represent a significant risk for HIV transmission. The amount of exposure can be reduced through the use of mask and protective eye wear.

Protective eye wear should be washed if it becomes contaminated. Ordinary spectacles may not provide adequate protection in some situations.

Any re-usable protective barrier contaminated with blood or body fluids should be cleaned by washing thoroughly after use and sterilized as indicated.

3. PREVENTION OF ACCIDENTS THROUGH SAFE HANDLING AND DISPOSAL OF SHARPS

The greatest risk of bloodborne pathogen transmission in health care settings is through percutaneous exposure. Efforts to prevent transmission must focus on preventing injury from contaminated sharp instruments by encouraging safe handling and disposal of sharps. Most sharp injuries associated with bloodborne transmission involve deep injuries with hollow bore needles. These injuries frequently occur when needles are recapped, cleaned, disposed off, or inappropriately discarded, e.g. used needles left on trolleys or beds.

3.1 Recapping Needles is Discouraged

Recapping needles is discouraged. In situations when recapping is unavoidable, the single handed method should be utilized. Recapping a needle with two hands increases the likelihood of sustaining a sharp injury. How to recap a needle with using a single hand is demonstrated below:

- a. Place needle cap on a hard flat surface;
- b. With one hand, hold syringe and use needle to scoop up the cap;

- c. When the cap covers the tip of the needle, use the other hand to place cap firmly on the needle hub.

All sharps should be handled with extreme care at all time and there use should be kept to the minimum. Puncture resistant disposal container must be available for the disposal of sharp and must be located as close to the point of use as possible. Sharps disposal container can be made of easily available objects, e.g. a tin with a lid, a thick plastic bottle or box. These containers are used to protect the health care worker from contaminated equipments. Used plastic syringes, needles and sharps must be placed carefully in the container, then disinfected by chemicals or physical method i.e. boiling or autoclaving before disposal. If possible, these disposable items should be incinerated.

Sharp containers are often overfilled, with sharps overflowing from the top. In order to reduce risk of transmission when discarding disposable sharps, health personnel should always:

- replace sharps disposal container by a new one when it is three quarters full;
- wear heavy duty gloves and take great care when transporting sharps containers;
- incinerate used equipment at a temperature sufficient to melt the needles.

Table 7.2: Good Practice for the Safe Handling and Disposal of Sharps

- ALWAYS dispose off your own sharps.
- NEVER pass used sharps directly from one person to other.
- During exposure prone procedures, the risk of injury should be minimized by ensuring that the operator has the best possible visibility, e.g. by positioning the patient, adjusting good light source and controlling bleeding.
- Protect fingers from injury by using forceps instead of fingers for guiding suturing.
- NEVER recap, bend or break disposable needle.
- Directly after use, place needles and syringes in a rigid container until ready for disposal.
- Locate sharps disposal containers close to the point of use, e.g., in patient's room, on the medicine trolley and in treatment room etc.
- Dispose used sharps in a puncture resistant container. NEVER place used sharps in other waste containers.
- Keep all sharps and sharps disposal containers out of the reach of the children.
- Prevent overflow by sending sharps disposal containers for decontamination or incineration when three quarters full.

3.1a Foot covers should be used in O.T./Labour rooms at all times

3.2 Management of Sharps Accidents

Each health facility should develop standard operating procedures to be followed by all health personnel in the case of sharps injury or other exposure.

In case of injury with a used needle or other sharp or if blood/body fluid is splashed in to the mouth, eyes or onto the broken skin, carry out the following procedure.

i) Needlepricks, cuts, bites or scratches

- a. Encourage bleeding by squeezing.
- b. Wash thoroughly with soap and water.
- c. Cover with waterproof dressing

Never put the pricked finger into mouth as a reflex

ii) Splashes to mouth or eyes

Rinse thoroughly with plenty of running water.

Most experts agree that the larger the volume of blood involved in the exposure, the greater the risk of infection. Therefore, first aid must begin as soon as possible after the exposure and aim to flush away as much inoculum as possible. Where there is minor bleeding, the wound and surrounding skin should be washed with soap and clean water, preferably running water. Exposed mucous membranes should be washed with large amounts of water. The use of antiseptic solutions as substitutes for water has not been proved to have any advantage and is not recommended because of the possible caustic effect. In the absence of water, antiseptic solutions would, however, have some merit.

If the same accidental exposure occurs more than twice at work place, the working procedure should be reviewed. For example, staff training may be required, or more sharps disposal containers may need to be made available.

Heavy duty gloves should be worn for cleaning instruments. If splashing of body fluid is likely, additional protective clothing should be worn, e.g. plastic aprons and protective spectacles.

Immediately report to infection control officer, preferable within 2-6 hours for considering post-exposure prophylaxis.

4. PROPER USE OF DISINFECTION AND STERILIZATION TECHNIQUES

As HIV and other bloodborne infections can be transmitted via needles, syringes and other equipment contaminated with body fluids, these items should be cleaned and sterilized, or

appropriately disinfected before each use. The method for decontamination of instruments and equipment depends on what they are used for and the associated level of risk of transmission as shown in the **Table 7.3**.

Table 7.3: Selecting the Method of Decontamination

Level	Items	Decontamination Method
High Risk	Instruments which penetrate the skin and the body	<ul style="list-style-type: none"> • Sterilization; • Single use of a sterile disposable item
Moderate Risk	Instruments which come into contact with mucous membranes or non-intact skin	<ul style="list-style-type: none"> • Sterilization • Boiling • Chemical disinfection
Low Risk	Equipment which comes into contact with intact skin	<ul style="list-style-type: none"> • Thorough washing

Efficient cleaning with detergent and warm water removes a high proportion of any microorganism present. All equipment should be dismantled before thorough washing.

4.1 Disinfection

Two commonly employed methods are boiling and chemical disinfection.

- i) Boiling is an effective method to disinfect equipment, e.g., needles and syringes, if autoclaving facilities are not available. Equipment which has already been cleaned should be boiled for 20 minutes.
- ii) Chemical disinfection is used for heat-sensitive equipment that is damaged by high temperature. Most disinfectants are effective against a limited range of microorganisms and vary in the rate at which they destroy microorganisms. Items must be dismantled and fully immersed in the disinfectant. Care must be taken to rinse off disinfected items with sterile water so that they do not become re-contaminated and so as to remove residual disinfectant. Chemical disinfectants are unstable and chemical breakdown can occur. They may also be corrosive and irritating to skin. Protective clothing may be required during handling these chemicals. Chemical disinfection is not as reliable as boiling or sterilization. The following disinfectants inactivate HIV:
 - Chlorine releasing compounds, e.g., bleach (0.5%-1%, freshly prepared)
 - 2 % Glutaraldehyde
 - 70 % ethyl and isopropyl alcohol

4.2 Sterilization

All forms of sterilization destroy HIV, HBV and HCV. Sterilized instruments which are unwrapped would become re-contaminated with microorganisms, so they should be wrapped carefully by appropriate material before sterilization. Consequently, these instruments should either be used immediately following sterilization or stored in clean, dry conditions and re-sterilized when required.

Moist steam under pressure is most effective method of sterilization. Three types of autoclave are in use: gravity- displacement, vacuum, and fuel-heated pressure cooker. Details in **Table 7.4**.

Table 7.4: Recommended Methods of Sterilization

• Moist heat (heat under pressure)		
Steam under pressure in autoclave or pressure cooker		
Pressure* psi at sea level	Temperature C°	Holding time** minutes
10	116	30
15	121	20
20	126	10
30	135	5
<i>If sterilization by moist heat is not possible, boiling for 20 minutes is acceptable</i>		
• Dry heat (electric or gas hot air oven)		
	160	120
	170	60
	180	30

* psi: pound per square inch (lb/sq in) At higher altitudes, the pressure indicated on the pressure gauge would be higher for a given temperature

** Sterilization time includes the time needed for the contents of the containers to reach sterilization temperature, the holding time and the cooling time before open. The autoclaving process would take longer than 90 minutes. A container is usually not filled over 75 % of its capacity.

* Adopted from Guidelines for Preventing HIV, HBV and other Infections in the Health Care Setting, (1996), WHO SEARO, New Delhi

